2015

Urban Water Management Plan

A review of current and future water resources

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Adopted June 7, 2016

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Abbreviations and Acronyms

ABAG	Association of Bay Area Governments
AF	Acre-Foot = 435.6 HCF = 325,828 Gallons
BAWSCA	Bay Area Water Supply and Conservation Agency
BMP	Best Management Practice
CCF/HCF	Hundred Cubic Feet = 748 Gallons
CII	Commercial, Industrial, and Institutional
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
DMMs	Demand Management Measures
DWR	California Department of Water Resources
ETo	Evapotranspiration
gpd	Gallons per Day
gpcd	Gallons per Capita per Day
hcf	Hundred Cubic Feet
IWRP	Integrated Water Resources Plan
IWSAP	Interim Water Shortage Allocation Plan
mgd	Million Gallons Per Day
NA	Not Applicable
NPDES	National Pollutant Discharge Elimination System
RWQCB	Regional Water Quality Control Board
SBWR	South Bay Water Recycling
SCVWD	Santa Clara Valley Water District
SFPUC	San Francisco Public Utilities Commission
UWMP	Urban Water Management Plan
WPCP	Water Pollution Control Plant
WSIP	Water Supply Improvement Program

Executive Summary

This 2015 Urban Water Management Plan (UWMP) serves as a water supply planning tool for the City of Milpitas. The UWMP identifies several key points regarding the Milpitas water supply:

- Customer water demands include land uses shown in Midtown and Transit Area Specific Plans, 2009 Water Master Plan, planned large redevelopments such as Serra Center and Pacific Mall, miscellaneous redevelopments, and addition of recycled water irrigation for Ed Levin County Park and two hillside golf courses
- The City has sufficient contractual water supply to meet customer demands
- The City is proactively seeking to expand its water supply options to provide both operational flexibility and reliability
- The City is planning to introduce groundwater as a new supply
- The City is working with several stakeholders to expand the recycled water system to achieve regional benefits
- The City's State-mandated targets for 2015 and 2020 of 159 and 146 gallons per day per capita (gpcd), respectively, are calculated by taking city-wide consumption divided by the population
- Due to the community's diligent efforts in complying with the Governor's call for conservation, the 2015 actual per capita usage was only 108 gpdpc; which is well within target levels
- 2015 water use is lower than estimated in the 2010 Plan due to severe drought conditions and water usage is expected to rebound to normal levels when the drought is over
- When water use rebounds, water use is still anticipated to remain below the 2020 water use target of 146 gpcd
- The 2010 Water Shortage Contingency Plan was successfully implemented and is incorporated into this Plan

This document was prepared in accordance with Department of Water Resources Guidelines.

Chapter 1 Introduction and Overview

1.1 Background and Purpose

Water planning is an essential function of water suppliers, and the public's recognition for the need for long term water supply planning has become heighted as California continues to grapple with the ongoing drought. The City of Milpitas (City) 2015 Urban Water Management Plan (UWMP) provides a framework for long term water planning and informs the public of the City's plans to ensure adequate water supplies through the year 2040. The UWMP also establishes a water use target that aids in meeting the State's goal of reducing per capita water use by 20% by 2020.

1.2 Urban Water Management Planning and California Water Code

This 2015 UWMP has been prepared in response to the California Urban Water Management Planning Act (California Water Code Division 6, Part 2.6, Sections 10610 through 10657), which requires all urban water suppliers to prepare and adopt a UWMP every five years. An urban water supplier is defined as a water supplier that provides over 3,000 acre-feet of water annually or serve 3,000 or more connections.

The UWMP Act has been modified over the years in response to the State's water shortages, droughts and other factors. A significant amendment was made in 2009, after the drought of 2007-2009 and as a result of the governor's call for a statewide 20% reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SB X7-7. The Water Conservation Act of 2009 requires retail urban water suppliers to report in their UWMPs their base daily per capita water use, 2015 interim urban water use target, 2020 urban water use target, and compliance daily per capita water use.

1.3 Plan Organization

The chapters of this 2015 UWMP follow the recommended UWMP organization provided in the California Department of Water Resources (DWR) 2015 UWMP Guidebook for Urban Water Suppliers. Included within each chapter are the required tables for retail urban water suppliers.

Chapter 2 Plan Preparation

2.1 Basis for Preparing a Plan

This 2015 UWMP has been prepared to address the requirements of the California Water Code (CWC). As indicated in Section 1.2, all publicly and privately owned urban water suppliers are required to prepare and adopt a UWMP every five years. The City meets the definition of an urban water supplier, which is a water supplier that provides over 3,000 acre-feet of water annually or serve 3,000 or more connections. As indicated in Table 2-1, the City served 15,865 municipal connections and 3,821,970 hundred cubic feet (hcf) (or 8774 acre-feet) of water in 2015.

Table 2-1: City of Milpitas Public Water System

Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015 (HCF)
4310005	City of Milpitas	15,865	3,821,970
	TOTAL	15,865	3,821,970
NOTES: The volume of water supplied in 2015 was a combination of deliveries from SFPUC (2,303,238 HCF) and SCVWD (1,518,732 HCF). The number of connections is the number of active connections as of December 2015; there were also 19 inactive connections at that time.			

UWMPs must describe the suppliers' service area, water use by customer class, water supply and demand, water service reliability and shortage response options, water transfer and exchange opportunities, water recycling efforts and conservation measures. This 2015 UWMP, which is an individual UWMP (see Table 2-2), updates and replaces the City's 2010 UWMP.

Table 2-2: Plan Identification

Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable*
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		
NOTES:			

The data in all tables in this UWMP are reported on a calendar year basis and in units of hundred cubic feet (hcf or HCF), unless noted otherwise (see Table 2-3). Within the text, units of million gallons per day (mgd) and acre-feet per year (AFY) are used in addition to hundred cubic feet.

Table 2-3: Agency Identification

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☐	Agency is a wholesaler
☑	Agency is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Month and Date that the Fiscal Year Begins (mm/dd)	
Units of Measure Used in UWMP (select from Drop down)	
Unit	CCF
NOTES: The City of Milpitas uses the notation HCF to denote hundred cubic feet. Throughout the text, HCF is used instead of CCF.	

Note that all tables in this report are in the standard format recommended by DWR to facilitate this agency's review.

2.2 Coordination and Outreach

The 2015 UWMP was prepared by City staff in coordination with the City's two potable water wholesalers, the San Francisco Public Utilities Commission (SFPUC) and the Santa Clara Valley Water District (SCVWD) (see Table 2-4). Additionally, the City notified surrounding cities, Santa Clara County, Bay Area Water Supply and Conservation Agency (BAWSCA) and the general public of its intention to modify the UWMP. Notification to other agencies was provided by letter, and notification to the general public was achieved through a display advertisement in *The Milpitas Post.*(Refer to Appendix A for copies of the public notifications.).

Table 2-4: Water Supplier Information Exchange

Table 2-4 Retail: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
SFPUC
SCVWD
NOTES:

Chapter 3 System Description

3.1 General Description

The City of Milpitas is located in Santa Clara County near the southern tip of San Francisco Bay, forty-five miles south of San Francisco. The City of Fremont borders Milpitas to the north and the City of San Jose borders Milpitas to the south. Most of its 14 square miles of land is situated between two major freeways (I-880 and I-680) and a county expressway. The City has approximately 10 square miles of valley floor to the west and four square miles of hillside areas to the east. Industrial and commercial areas are located on the valley floor with residential areas on the valley floor and hillside. Parks and recreational open spaces are distributed throughout residential areas.

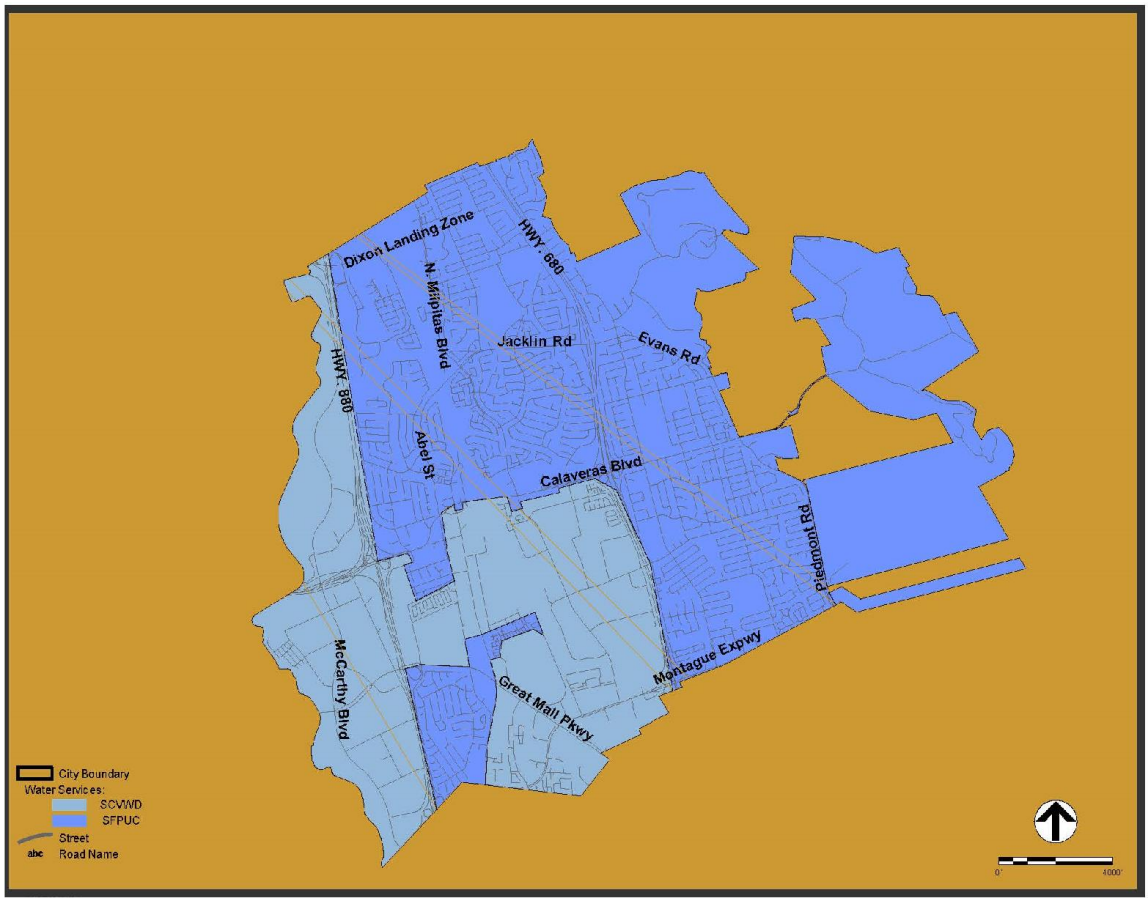
Since its inception in 1954, the City has experienced steady growth and development. At the time of incorporation, the City covered an area of 2.9 square miles with a population of 825. Rapid growth began with the Ford Motor Company assembly plant in 1955 and continued with the high technology industry in the 1970's. The majority of the valley floor is fairly new. Growth slowed as result of the recession of 2008; however in more recent years the transformation of industrial areas of the City into high-density housing has resumed. The City contains a strong complement of employment and retail uses as well as housing. Large sources of employment include manufacturing, the school district and the Great Mall shopping center.

The City owns, operates and maintains a potable water distribution system which consists of approximately 245 miles of water main, 5 water tanks, 5 pump stations, 16 pressure regulating valves, an emergency supply well and emergency interties. The City also operates and maintains a recycled water system owned by the City of San Jose South Bay Water Recycling (SBWR) program.

As shown in Figure 3-1, the City's potable water supply system is divided into two distinct service areas, corresponding to the areas served by the City's two wholesalers: SFPUC and SCVWD. The City does not blend SFPUC and SCVWD water under normal operating conditions; however, they can be interconnected to provide an emergency water supply, if needed.

Refer to Figure 6-2 for a map of recycled water infrastructure within the City.

Figure 3-1: Service Area Map



3.2 Service Area Climate

The City's Mediterranean climate is characterized by warm, dry summers and mild wet winters. Annual precipitation averages about 16 inches. Annual ET_o in the region is 45.3 inches, and average temperature is 61 degrees Fahrenheit.

Scientists and water managers are beginning to observe the effects of climate change in California. Santa Clara County is expected to see increasing temperatures. Increased temperatures could result in more extreme heat and drought events and increased demands. Future projections of precipitation are not as clear.

3.3 Service Area Population and Demographics

The City's 2015 population was 72,606 and is projected to grow over the next twenty-five years as shown in Table 3-1. These population numbers are based on current planning documents including the City's General Plan and Association of Bay Area Governments (ABAG). Any change due to new plans adopted after this writing will change the projections. The population estimates reflect the City's entire water service area.

Table 3-1: Population – Current and Projected

Table 3-1 Retail: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
	72,606	82,300	90,400	98,100	106,000	109,100
NOTES: Population for 2015 based on Department of Finance; Populations for 2020-2035 based on City of Milpitas General Plan; Population for 2040 based on Association of Bay Area Governments.						

The expected population growth will come from redevelopment of two central areas defined in the Midtown Specific Plan and Transit Area Specific Plan. The Midtown Specific Plan outlines planned growth of a mixed-use community that includes high-density, transit-oriented housing and a central community "gathering place," while maintaining needed industrial, service and commercial uses. The plan is long-range in nature, intended to guide development through the year 2030. Some land in the Midtown Area is undeveloped and readily developable over the short-term, while other parcels may be developed over a longer time frame. Overall, the Midtown Specific Plan provides for up to 4,860 new dwelling units and supports retail development, new office developments at key locations, bicycle and pedestrian trails linking the areas together, and new parks to serve residential development.

The Transit Area Specific Plan outlines planned growth at the hub of the existing Santa Clara Valley Transportation Authority (VTA) Light Rail station and the now under construction Bay Area Rapid Transit (BART) station near the City's Great Mall shopping center. The plan calls for new residential and mixed-use developments. New residential neighborhoods will consist of mixed-use areas with commercial use on the ground floor and residential units above, and high-density residential neighborhoods. Industrial areas will be transitioned to areas that support higher intensity mixed use. Overall, the Transit Area Specific Plan provides for up to 7,000 new dwelling units (combined with the Midtown Specific Plan), 1,000,000 square feet of office space and 300,000 square feet of retail space. As of this writing, approximately 3,000 dwelling units have received entitlements in the Transit Area Specific Plan area.

Chapter 4 System Water Use

This chapter focuses on potable water demand. Recycled water demands are addressed in Section 6.3.

Table 4-1 summarizes potable water use in 2015 based on customer billing data and an estimate of water losses. The 2015 water demand figures reflect significant conservation efforts among the City's customers due to the ongoing drought in which the Governor ordered the State's first mandatory water restriction and the City's wholesalers called for increasing levels of conservation. In January 2014, both of the City's water suppliers declared water supply shortages and requested 10% conservation. Due to ongoing drought conditions, a month later SCVWD increased their conservation request to 20%, and eventually, in 2015, requested mandatory 30% conservation.

Table 4-1: 2015 Potable Water Use

Table 4-1 Retail: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered	Volume (HCF)
Single Family		Drinking Water	1,114,804
Multi-Family		Drinking Water	664,332
Commercial		Drinking Water	581,984
Institutional/Governmental		Drinking Water	117,282
Industrial		Drinking Water	587,953
Landscape		Drinking Water	349,413
Other	Fire	Drinking Water	1,925
Losses		Drinking Water	374,049
		TOTAL	3,791,742
NOTES: Losses are based on the most recent 12 months available, which is December 2014 to November 2015; note this is different than the 2015 calendar years used for data reporting through the rest of the UWMP.			

Table 4-2 presents the City's potable water demand projections through the year 2040, and Table 4-3 combines the potable demand with recycled water demand (see Section 6.3) to obtain the City's total water demand projection.

The potable water demand projections are built off of the City's 2009 Water Master Plan Update (Water Master Plan), which estimated total water demand at buildout to be 17.4 mgd. Of the total demand 17.0 mgd was anticipated to be potable and 0.4 mgd to be recycled water. The buildout

condition in the Water Master Plan included anticipated future developments as identified in the General Plan, Midtown Specific Plan, Transit Area Specific Plan and 19 General Plan amendments. Since completion of the Water Master Plan, additional developments have been completed, approved or proposed to the City's Planning Commission. The Pacific Mall and Serra Center are two large developments included in the demand projections in this UWMP; additionally, small redevelopment projects are captured in these projections. Plans for recycled water infrastructure have also expanded since completion of the Water Master Plan and include service to customers who are not currently served by the City as they currently depend on SCVWD for raw water supplies (see Section 6.3). The projections shown in Table 4-2 and Table 4-3 account for the changing setting. The total water demand in the revised buildout is estimated to be 20.9 mgd (or 10,216,035 hcf) buildout condition – of which 18.5 mgd is potable and 2.4 mgd is recycled water. For this UWMP buildout is assumed to coincide with the year 2040.

Table 4-2: Potable Water Demand Projection

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type	Additional Description *(as needed)*	Projected Water Use (HCF) *Report To the Extent that Records are Available*				
		2020	2025	2030	2035	2040-opt
Single Family		1,280,037	1,445,269	1,610,502	1,775,734	1,940,967
Multi-Family		1,120,056	1,575,780	2,031,504	2,487,228	2,942,952
Commercial		768,857	955,729	1,142,602	1,329,475	1,516,347
Industrial		746,930	905,907	1,064,884	1,202,082	1,339,279
Institutional/Governmental		138,102	158,922	179,742	200,562	221,382
Landscape		335,484	277,994	235,025	192,055	149,086
Losses		485,445	596,842	708,238	819,634	931,031
Other	Fire	2,498	3,072	3,645	4,218	4,791
TOTAL		4,877,409	5,919,515	6,976,142	8,010,988	9,045,835
NOTES:						

Table 4-3: Total Water Demand Projection

Table 4-3 Retail: Total Water Demands (HCF)						
	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	3,791,742	4,877,409	5,919,515	6,976,142	8,010,988	9,045,835
Recycled Water Demand *From Table 6-4*	372,805	500,800	869,100	961,500	1,075,900	1,170,200
TOTAL WATER DEMAND	4,164,547	5,378,209	6,788,615	7,937,642	9,086,888	10,216,035
NOTES:						

4.1 Water Usage by Sector

4.1.1 Single-family residential

The City has approximately 12,400 single-family accounts. Among the City's new residential development are some single family units; however, overall the City's newer housing is shifting from the traditional suburban single family home with individual yards to urban high density housing units.

4.1.2 Multifamily

The City has approximately 1,900 multiple-family accounts serving 9,157 dwelling units. These share outdoor space and some are combined with retail and office space as described in the specific plans for future development around the BART station.

This demand sector is projected to have significant growth as a result of the numerous residential and mixed use developments under construction, approved, pending entitlement or in plan review.

4.1.3 Commercial

The City has a complex mix of commercial customers, ranging from beauty shops, supermarkets, and gas stations to multi-story office buildings, outlet and regional shopping centers, and high-volume restaurants and other facilities serving the visitor population.

4.1.4 Industrial

The City retains research & development facilities, along with some food preparatory facilities.

4.1.5 Institutional/Governmental

The City has a stable institutional/governmental sector, including local government, schools, a county correctional facility, and outpatient medical facilities.

4.1.6 Landscape

Irrigation demand is anticipated to increase due to continued development of vacant lands and redevelopment in the commercial and industrial sectors. However, landscape conversions to recycled water and increased efficiency in irrigation systems is expected to offset future increases in potable water demand for landscaping.

4.1.7 Sales to other agencies

As a retailer, the City purchases water for its own use and does not sell water to other agencies.

4.1.8 Groundwater recharge

The City of Milpitas does not manage this type of program.

4.1.9 Saline water intrusion barriers

The City of Milpitas does not manage this type of program.

4.1.10 Agricultural

The City of Milpitas has no agricultural customers.

4.1.11 Distribution System Losses

The water loss projections were developed assuming the ratio of water loss to other categories of demand remains constant over the planning horizon.

Refer to Section 4.1.17 for additional details.

4.1.12 Exchanges

Refer to Section 6.5.

4.1.13 Surface Water Augmentation

The City of Milpitas does not manage this type of program.

4.1.14 Transfers

Refer to Section 6.5.

4.1.15 Wetlands or Wildlife Habitat

The City does not manage this type of program.

4.1.16 Other

The City has approximately 550 fire service accounts. The Other usage shown in the tables in this chapter is water use associated with those accounts.

4.1.17 Distribution System Water Losses

One measure of the integrity of a water system is distribution system water losses – the difference between the amount of water entering a system (supplied or purchased) and the amount authorized for consumption. Water losses include both real losses (i.e. leaks) and apparent losses (i.e. unauthorized consumption, meter inaccuracies and data errors). Losses for the City in 2015 were estimated using the American Water Work Association (AWWA) Water Audit methodology using the most recent 12 months of data, which was December 2014 through November 2015 and were calculated to be just under 11% (see Table 4-4).

Table 4-4: 12 Month Water Loss Audit Reporting

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss* (HCF)
12/2014	374,049
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES:	

4.2 Future Water Savings

As indicated in Table 4-5, estimates of future water savings from adopted codes, standards, ordinances or transportation and land use plans are not included in the projections in this UWMP.

The 2015 actual water use already reflects significant water savings compared to historical use. During the current drought, the City has made several amendments to its water conservation ordinance that assisted in achieving these water savings.

4.3 Water Use for Lower Income Households

Retail water agencies are required to include projected water use for lower income households (i.e. those with less than 80% of the area median household income) in projected water demand. This section documents the City's best effort to do so. However, please note that the City does not use this estimate for any planning purposes. Projected water use by lower income households is estimated by multiplying the projected housing need for the City by the average household size and assumed per capita water use.

As indicated in Table 4-5, the water use projections presented in Table 4-2 and Table 4-3 include projected water use for lower income households.

The City of Milpitas Housing Element Update 2015-2023 projects a need for 1,574 lower income housing units for the service area. This includes 1,004 units for very low (0-50% of AMI) and 570 units for low (51-80% of AMI) income categories. The average household size for the City is 3.41 persons per household. Assuming a per capita water use of 146 gpcd, which corresponds to the City's 2020 water use target, the projected water use for the low income households is estimated to be 1,047 hcf (or an average of 2,100 gpd).

Table 4-5: Other Considerations Included in Water Use Projections

Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	No
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc… utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES: The City of Milpitas Housing Element Update 2015-2023 projects a need for 1,574 lower income housing units for the service area. The projected water use for those units is estimated to be 1,047 HCF. Although the City does not track demands for lower income households separately from other households, the City does make projections for overall growth planned within its service area, as such lower income water demand is reflected in the demand projections in Tables 4-2 and 4-3.	

Chapter 5 SB X7-7 Baselines & Targets

In accordance with the Water Conservation Bill of 2009 (SB X7-7), urban retail water suppliers must determine a baseline period on which the baseline water use is calculated and establish target water use for the years 2015 and 2020 in order to help the State achieve 20% reduction in urban water use by the year 2020. Within the 2015 UWMP, water agencies must demonstrate compliance with their established water target for the year 2015.

This chapter presents a summary of the City's SB X7-7 baselines and targets. More detailed information can be found within the SB X7-7 Verification Forms. (Refer to Appendix B)

Table 5-1: Baselines and Targets Summary

Table 5-1 Baselines and Targets Summary *Retail Agency or Regional Alliance Only*					
Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*1995*	*2004*	*183*	*164*	*146*
5 Year	*2003*	*2007*	*168*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: Target is based on Method 1.					

5.1 Baseline Periods

Because the percentage of recycled water use in 2008 was less than 10% of the total water use, the City must use a base period of ten continuous years, where the ending year must be between December 31, 2004 and December 31, 2010. The City selected its ten-year base period to be from 1995 to 2004. During this period, the average daily per capita water use was 183 gpcd. (Refer to Table 5-1)

SB X7-7 includes a minimum water use reduction requirement, ensuring that each water agency's 2020 urban water use target is below 95% of its five-year base per capita water use. The five-year base must be continuous, ending no earlier than December 31, 2007 and no later than December 31, 2010. The City selected its five-year base period to be from 2003 to 2007. (Refer to Table 5-1).

5.2 Water Use Targets

State regulations allow the City to select one of four methodologies developed by the California Department of Water Resources (DWR) to determine the 2020 urban water use target:

- Method 1: Gross Water Use (80% of Base Daily Per Capita Water Use)
- Method 2: Performance Standards

- Method 3: 95% of Regional Target
- Method 4: Water Savings

In developing and adopting the 2010 UWMP, the City adopted Method 1, consistent with the State's 20% reduction mandate. In the 2010 UWMP, the City determined its base daily per capita water use to be 176 gallons per day as averaged over the ten-year period from July 1, 1995 to June 30, 2004 and, therefore, found that the target per capita water use for the year 2020 was 141 gallons per day (or 80% of the baseline). In this 2015 UWMP, the City transitioned to calendar year reporting to align with DWR's preferred approach. Using the ten-year baseline usage of 183 gpcd, the equivalent fiscal year basis 2020 water use target is 146 gpcd.

As discussed in Section 5.1, SB X7-7 includes a minimum water use reduction requirement, ensuring that each water agency's 2020 urban water use target is below 95% of its five-year base per capita water use. Given the City's five-year base daily per capita water use of 168 gpcd, a 5% reduction equates to 159 gpcd, which is more than the 146 gpcd noted above, as such no further adjustment is necessary.

SB X7-7 sets forth an interim urban water use target for 2015 to ensure progress toward the 2020 target. The 2015 interim urban water use target is set as the midpoint between the City's baseline daily per capita water use and its 2020 urban water use target. The City's interim target is 164 gpd.

5.3 SB X7-7 Compliance

The City's 2015 daily per capita water use was 108 gpcd, which is less than the both the City's 2015 interim target and 2020 target.

Table 5-2: 2015 Compliance

Table 5-2: 2015 Compliance
Retail Agency or Regional Alliance Only

Actual 2015 GPCD*	2015 Interim Target GPCD*	**Optional Adjustments to 2015 GPCD** *From Methodology 8*					2015 GPCD* *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2015 GPCD*		
108	164				0	108	108	Yes
**All values are in Gallons per Capita per Day (GPCD)*								
NOTES:								

Although the 2015 water use reflects the current drought conditions, the City expects to meet the 2020 target due to ongoing implementation of existing water conservation and "Demand Management Measures" (refer to Chapter 9), and increasing recycled water usage. The City's per capita water use prior to the drought in 2013 is considered the upper limit to which water use may rebound following the drought; the 2013 per capita usage of 142 gpcd is less than the 2020 target of 146 gpcd.

Chapter 6 System Supplies

6.1 Purchased or Imported Water

The City purchases treated potable water from two wholesalers: SFPUC and SCVWD. These two sources are not blended under normal operating conditions, however, the distribution systems are physically interconnected with isolation valves to provide emergency water supply if needed.

In its incorporation year of 1954, the City began distributing SFPUC water to all residents and businesses, expanding to the hillside area in 1982. In August 1993, the City began serving SCVWD water, primarily to the commercial and industrial areas of the City (west of Highway 880, and also south of Calaveras Blvd. and west of Highway 680). Figure 3-1 shows the SFPUC and SCVWD service areas.

Most of the City's growth is occurring within areas served by SCVWD and as these areas grow so does the percentage of the City's potable supply that comes from SCVWD. Approximately 40% of the City's potable water was from SCVWD in 2015, which is an increase from 25% from SCVWD in 2010.

6.1.1 San Francisco Public Utilities Commission (SFPUC)

Milpitas purchases wholesale water from the City and County of San Francisco's regional water system. This supply is predominantly snowmelt from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by SFPUC from its local watersheds and facilities in Alameda County. On June 2, 2009, the City entered into a 25-year Water Supply Agreement with the San Francisco Public Utilities Commission (SFPUC). This agreement affirms the City's perpetual right to purchase up to 9.23 million gallons per day (mgd) of treated potable water unless SFPUC has a water shortage.

The Bay Area Water Supply and Conservation Agency (BAWSCA) provides regional water reliability planning and conservation programming for the benefit of its 26 member agencies that purchase wholesale water supplies from the San Francisco Public Utilities Commission. Collectively, the BAWSCA member agencies deliver water to over 1.74 million residents and nearly 40,000 commercial, industrial and institutional accounts in Alameda, San Mateo and Santa Clara Counties.

BAWSCA also represents the collective interests of these wholesale water customers on all significant technical, financial and policy matters related to the operation and improvement of the SFPUC's Regional Water System (RWS).

BAWSCA's role in the development of the 2015 UWMP updates is to work with its member agencies and the SFPUC to seek consistency among the multiple documents being developed.

6.1.2 Santa Clara Valley Water District (SCVWD)

The City began receiving treated surface water from SCVWD in August 1993 under a September 1984 contract between the City and SCVWD. The supply delivery is adjusted annually based on a binding 3-year annual delivery schedule. The City's annual purchase must be at least 90% of the delivery schedule and the City's monthly "supply guarantee" is at least 15% of the annual delivery schedule. SCVWD provides treated water from its Penitencia and Santa Teresa treatment plant via its Milpitas Pipeline which terminates in the City.

Although the City purchases are currently limited to surface water largely purchased by SCVWD from the State Water Project and Central Valley Project, SCVWD's overall water supply comes

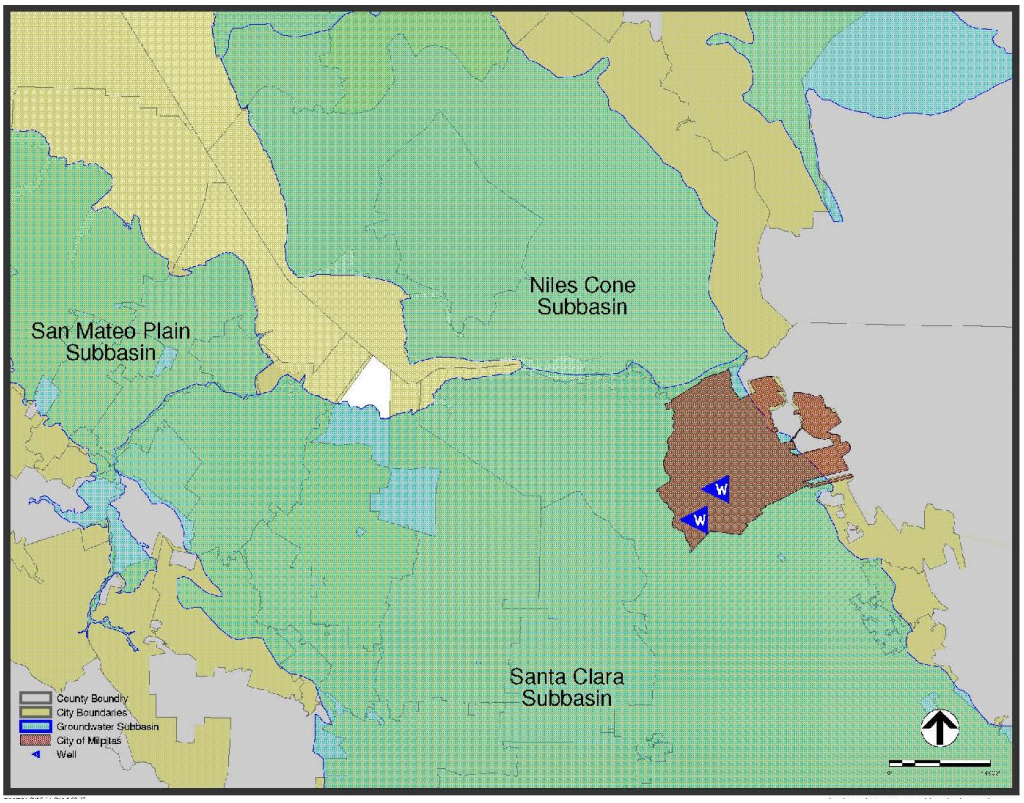
from a variety of sources. Nearly half is from local groundwater aquifers, and more than half is imported from the Sierra Nevada through pumping stations in the Sacramento-San Joaquin River Delta. Both groundwater and imported water are sold to retailers. SCVWD also manages the groundwater basin to the benefit of agricultural users and other independent users who pump groundwater. Local runoff is captured in SCVWD reservoirs for recharge into the groundwater basin or treatment at one of SCVWD's water treatment plants. The total storage capacity of these reservoirs is about 170,000 acre-feet (AF).

6.2 Groundwater

Currently, the City does not use groundwater to meet customer demands under normal conditions. The City has one existing well, Pinewood Well, and one planned, Curtis Well. These wells are located in the southwestern part of the City (See Figure 6-1). Although Pinewood Well is permitted for active use, the City currently reserves groundwater supply for emergency supply in the event that SFPUC and SCVWD cannot deliver contract treated water supplies. Curtis Well is not yet constructed.

The local groundwater basin is called the Santa Clara Valley Sub-basin. The basin is made up on unconsolidated alluvium. Within City boundaries, the eastern portion of the basin is unconfined and does not contain an aquitard to prevent contamination from spreading from surface to groundwater. The western portion of the City overlies a confined, aquitard-protected area with water of good quality.

Figure 6-1: Groundwater Resources



The Santa Clara Valley Sub-basin is not adjudicated and has not been identified to be in overdraft by DWR. Neighboring utilities, including the City of Santa Clara and the City of San Jose, utilize the groundwater basin. The basin has historically experienced periods of overdraft and land surface subsidence, particularly during the 1920s and 1960s when expanding development and agricultural production increased demand. The Santa Clara Valley Water Conservation District (today's SCVWD) was originally formed in 1929 to alleviate subsidence through artificial recharge. The SCVWD manages the groundwater basin, monitoring the basin for local subsidence, managing surface recharge, and working with local retailers to prevent subsidence. For more information on basin characteristics and management, please refer to SCVWD's Groundwater Management Plan.

The City recently completed a Water Supply Augmentation Study which recommended adding groundwater to the daily water use. The City plans to construct treatment and operational improvements at Pinewood Well in the near future, and to complete Curtis Well in the next three years. Constructing additional wells has also been discussed.

For customer acceptance, existing mineral, taste, and odor concerns at Pinewood Well would need to be addressed before introduction into the distribution supply. The Augmentation Study recommends in-pipe blending of the well water with imported treated supplies to address these issues. The blending system would require the addition of a small booster pump. Additionally, a non-operational diesel drive at Pinewood requires repair. Curtis Well requires a well pad, submersible pump, downhole piping, submersible electrical cables, pump house, chlorine injection, treatment filters, and other components to be made operational. Testing, permitting, and regulatory compliance would also need to be addressed prior to operation of Curtis Well.

Table 6-1 shows the historical annual volume (in hundred cubic feet) of groundwater pumped since 2010. This groundwater was pumped only for the purpose of routine water quality testing. It was not added to the municipal water supply.

Table 6-1: Groundwater – Historical Volume Pumped

Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Add additional rows as needed						
Alluvial Basin	Santa Clara Valley, Santa Clara Subbasin	253	109	213	124	33
	TOTAL (HCF):	253	109	213	124	33
NOTES: During the reporting period, groundwater was pumped only for testing purposes. No groundwater was pumped into the distribution system.						

Table 6-9 shows the projected annual volume of groundwater pumped, in five-year intervals. The projection is based on well capacity values reported in the Augmentation Study (a maximum withdrawal rate of 2,000 gallons per minute was assumed) and reflects a tiered introduction of groundwater into the municipal supply, with Pinewood Well's 1,219,230 hcf available by 2020, Curtis Well's 341,578 hcf available by 2025, and an estimated total of 2,439,840 hcf with two additional wells online by 2030. The Augmentation Study concluded that 2,439,840 hcf was a reasonable City-wide extraction volume given equipment restrictions and aquifer recharge considerations.

6.3 Wastewater and Recycled Water

The City does not treat wastewater, but instead pumps its wastewater, consisting primarily of industrial and sanitary discharge, through two force mains to the San Jose/Santa Clara Water Pollution Control Plant (WPCP), also known as the San Jose/Santa Clara Regional Wastewater Facility (RWF). Table 6-2 shows the City's wastewater quantity for collection and treatment.

Table 6-2: Wastewater Collected within Service Area in 2015

Table 6-2 Retail: Wastewater Collected Within Service Area in 2015						
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2015 (HCF)	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? *(optional)*
Add additional rows as needed						
City of Milpitas	Metered	2,994,252	City of San Jose	San Jose/Santa Clara Water Pollution Control Plant	No	Yes
Total Wastewater Collected from Service Area in 2015 (HCF):		2,994,252				
NOTES: Units are in HCF to maintain consistency with units noted in Table 2-3. This corresponds to 2,240 MG.						

Wastewater treatment is provided by agreement with the cities of San Jose and Santa Clara (as joint owners of WPCP). Under terms of the agreement, the City pays a capital share (in proportion to the City's 14.25 mgd capacity rights and the total Plant capacity) and pays an operating cost share based on discharge volumes to WPCP. WPCP is one of the largest advanced wastewater

treatment facilities in California, treating an average of 110 million gallons of wastewater per day from over 1.4 million residents and 17,000 main business connections, encompassing the cities of San Jose, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. Most of the final treated water is discharged into the South San Francisco Bay. Approximately 13% is supplied to South Bay Water Recycling (SBWR) for distribution to customers. Because the WPCP is outside of the City's service area, Table 6-3 is not required; however to maintain the same table numbering as the DWR standard tables within this UWMP, Table 6-3 is included below.

Table 6-3: Wastewater Treatment and Discharge within Service Area in 2015

Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2015										
☑	No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.									
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
						Total	0	0	0	0
NOTES:										

As a tributary agency to the WPCP, the City of Milpitas has rights to the recycled water purveyed by SBWR. The City purchases recycled water from SBWR through a contract with the City of San Jose. Figure 6-2 depicts the City's recycled water distribution system.

The City operates and maintains the recycled water distribution facilities within City boundaries through a contract with the City of San Jose, whereby Milpitas provides day-to-day operational services and helps to comply with recycled water permit requirements within the City. Design and construction criteria pertaining to recycled water are included in SBWR's guidelines and Rules and Regulations.

Recycled water is predominantly used for landscape irrigation within the City but is also used for industrial use. As indicated in Table 6-4, landscape irrigation and industrial uses of recycled water are projected to continue growing within the City, and golf course irrigation is anticipated to be added as a new recycled water use type within the City's service area.

The City of San Jose in coordination with SCVWD recently completed the SBWR Strategic and Master Plan, which describes and quantifies potential uses of recycled water throughout the SBWR service area and addresses technical and economic feasibility of the potential uses, including nonpotable and potable alternatives.

Figure 6-2: Milpitas Recycled Water Distribution System

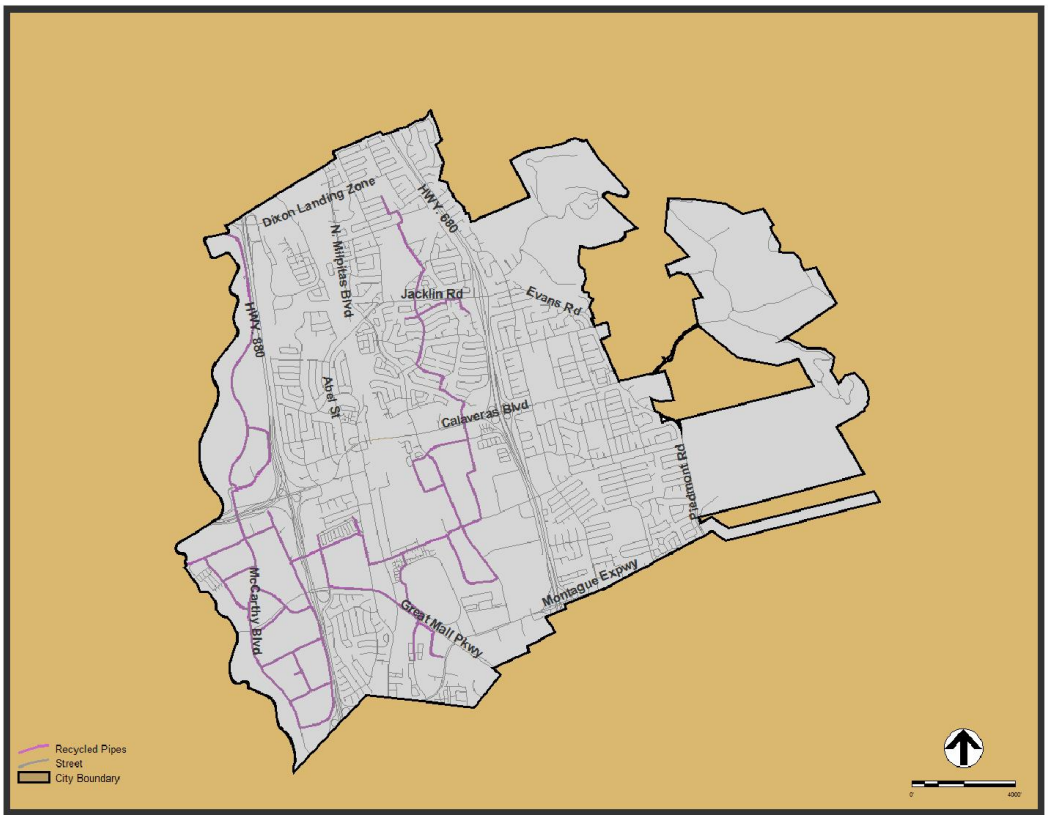


Table 6-4: Current and Projected Uses of Recycled Water

Table 6-4 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area								
☐	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.							
Name of Agency Producing (Treating) the Recycled Water:		City of San Jose						
Name of Agency Operating the Recycled Water Distribution System:		South Bay Water Recycling						
Supplemental Water Added in 2015								
Source of 2015 Supplemental Water								
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation								
Landscape irrigation (excludes golf courses)		Tertiary	371,294	492,600	592,900	678,700	764,600	837,200
Golf course irrigation		Tertiary			261,400	261,400	261,400	261,400
Commercial use								
Industrial use		Tertiary	1,511	8,200	14,800	21,400	49,900	71,600
Geothermal and other energy production								
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR)*								
Surface water augmentation (IPR)*								
Direct potable reuse								
Other *(Provide General Description)*								
		Total:	372,805	500,800	869,100	961,500	1,075,900	1,170,200
*IPR - Indirect Potable Reuse								
NOTES:								

There are two golf courses within the City – Spring Valley Golf Course and Summitpointe Golf Club – which currently rely on raw water deliveries of South Bay Aqueduct water from SCVWD for their irrigation. Due to the drought, SCVWD curtailed its deliveries to these two entities, and the City, SCVWD, the Santa Clara County Parks Department (which owns the land operated by Spring Valley Golf Course), Spring Valley Golf Course and Summitpointe Golf Club are collaborating on plans to extend recycled water infrastructure to these golf courses. The recycled water extensions to the golf courses would be coordinated with the Milpitas Recycled Water Pipeline Extension Project, which will extend the existing recycled water infrastructure to the eastern side of the City allowing existing potable water irrigators to convert to recycled water.

The recycled water projections in Table 6-5 also include projects currently underway to convert potable users within the vicinity of the existing recycled water system, irrigation and indoor recycled water anticipated within the Transit Area Specific Plan area, conversion of cooling towers as identified through a SBWR Cooling Tower Initiative and the potential to extend the recycled water system to capture additional irrigation use.

Despite the fact that recycled water is not subject to drought restrictions, the City like other recycled water retailers has seen a decrease in recycled water use during the current drought. That reduction explains in part why the 2015 actual use is less than the use projected for 2015 in the City's previous UWMP.

Table 6-5: 2015 Recycled Water Use Projected versus Actual

Table 6-5 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual			
☐	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.		
Use Type		**2010 Projection for 2015**	**2015 Actual Use**
Agricultural irrigation			
Landscape irrigation (excludes golf courses)			371,294
Golf course irrigation			
Commercial use			
Industrial use			1,511
Geothermal and other energy production			
Seawater intrusion barrier			
Recreational impoundment			
Wetlands or wildlife habitat			
Groundwater recharge (IPR)			
Surface water augmentation (IPR)			
Direct potable reuse			
Other	*Irrigation and industrial*	483,008	
	Total	483,008	372,805
NOTES: The 2010 UWMP did not project recycled water use by use type; thus the 2010 Projection for 2015 is reported as Other.			

To encourage the use of recycled water, the City has an ordinance that prohibits the use of potable water for irrigation if recycled water is available and coordinates with SBWR and SCVWD on recycled water planning and implementation projects. The City has explored the possibility of connecting the recycled water infrastructure in its service area with that of the neighboring San Jose Water Company (SJWC), who is another SBWR retailer; a connection between the two retailer's systems would improve overall reliability. Additionally the City is looking to secure funding from local and state agencies to offset capital costs as well as planning costs for expansion of the recycled water system. These methods to expand future recycled water use are summarized in Table 6-6.

Table 6-6: Methods to Expand Future Recycled Water Use

Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
☐	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Ordinance	The City has an ordinance that prohibits the use of potable water for irrigation if recycled water is available.	Currently in place	733,115
Coordination with Recycled Water and Potable Water Wholesalers	The City coordinates with SBWR and SCVWD on recycled water planning and implementation of projects.	Currently in place	
Coordination with Neighboring Recycled Water Retailers	The City and San Jose Water Company have discussed an intertie between the recycled water systems in their two service areas.	Currently underway	
Funding Pursuit	The City is pursuing funding for planning, design and construction of recycled water system expansion.	Currently underway	
		Total (HCF):	733,115
NOTES: Together the methods identified in this table are anticipated to result in an increase of 733,115 HCF per year (or 1,683 AFY). The methods to expand recycled water in combination with rebound that is anticipated to occur following the current drought result in the increase in recycled water use projected in Table 6-4.			

6.4 Desalinated Water Opportunities

Desalination is the most costly of all treated waters available for the City, and as such the City does not plan to implement a desalination project at this time. However, desalination is still considered a viable option for a long-term augmentation method or back-up supply, especially with collaboration amongst neighboring agencies. The City's recent Water Supply Augmentation Study recommended that the City consider a partnership with a regional water purveyor for a local desalination plant.

The City is aware of the Bay Area Regional Desalination Project, of which SCVWD is a partner. More information on the regional desalination project is available at http://www.regionaldesal.com/. At this time, the District is not including desalination in its projected water supplies.

6.5 Exchanges or Transfers

6.5.1 Exchanges

Since the early 1990s, the water exchange market (including water rights trading) has expanded to account for approximately 5% of all water used annually by California businesses and residents. However, the approval process for water exchanges have become more complex and difficult as water contracts shift from short-term to several-year durations, new pumping legislation is introduced as a result of controversies arising from water banking, unprecedented droughts, and other issues. It is a result of these complications that the City does not have, or plan to have, any exchange opportunities for the purpose of reducing costs or improving water quality.

6.5.2 Transfers

The City has interties with neighboring San Jose Water Company (SJWC) and Alameda County Water District (ACWD) for emergency water supply.

If a short-term or emergency supply were needed, the Alameda County Water District interties, both of which are 8-inches in diameter, could each suffice to supply the City with approximately 2.3 millions of gallons per day per day, thus providing 4.6 millions of gallons per day, which is nearly half of Milpitas' pre-drought average day demand. If more interties were constructed and connected, it would be possible to purchase an even higher volumetric flow rate from Alameda County Water District,

6.6 Future Water Projects

The City is able to meet future projected water needs from wholesale water purchases; however, as discussed in Section 6.2, the City recently completed a Water Supply Augmentation Study which recommended development of groundwater supplies and increased recycled water use to provide additional reliability. Table 6-7 summarizes the expected increase in water supply as a result of these projects.

6.7 Summary of Existing and Planned Sources of Water

Table 6-8 and Table 6-9 summarize existing and projected water supplies.

Table 6-7: Future Water Supply Projects

Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency (HCF)
	Yes/No	Name				
Groundwater Development	No			2017	All Year Types	1,219,920 to 2,439,840
Increased Recycled Water Use	Yes	Santa Clara Valley Water District	A portion of the City's expected recycled water expansion projects are anticipated to be a joint project with Santa Clara Valley Water District	Ongoing	All Year Types	797,395
NOTES:						

Table 6-8: Retail Water Supplies – Actual

Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2015		
		Actual Volume (HCF)	Water Quality	Total Right or Safe Yield *(optional)*
Purchased or Imported Water	SFPUC	2,303,238	Drinking Water	
Purchased or Imported Water	SCVWD	1,518,732	Drinking Water	
Recycled Water	SBWR	370,731	Recycled Water	
Total:		4,192,701		0
NOTES:				

Table 6-9: Retail Water Supplies – Projected

Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply (HCF) *Report To the Extent Practicable*									
		2020		**2025**		**2030**		**2035**		**2040** *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Purchased or Imported Water	SFPUC	4,503,944		4,503,944		4,503,944		4,503,944		4,503,944	
Purchased or Imported Water	SCVWD	1,957,955		2,563,035		3,172,995		4,051,337		4,051,337	
Groundwater	Santa Clara Valley Basin	1,219,920		1,561,498		2,439,840		2,439,840		2,439,840	
Recycled Water	SBWR	500,800		869,100		961,500		1,075,900		1,170,200	
Total:		8,182,619	0	9,497,577	0	11,078,279	0	12,071,021	0	12,165,321	0
NOTES:											

Chapter 7 Water Supply Reliability

7.1 Constraints on Water Sources

Individual Supply Guarantee

San Francisco has a perpetual commitment Water Supply Assurance (WSA) to deliver 184 mgd to the 24 permanent wholesale customers collectively. San Jose and Santa Clara are not included in the Supply Assurance commitment and each has temporary and interruptible water supply contracts with San Francisco. The Supply Assurance is allocated among the 24 permanent wholesale customers through Individual Supply Guarantees (ISG), which represent each wholesale customer's allocation of the 184 mgd Supply Assurance.

2018 Interim Supply Limitation

As part of its adoption of the Water System Improvement Program (WSIP) in October 2008, discussed separately herein, the SFPUC adopted a water supply limitation, the Interim Supply Limitation (ISL), which limits sales from San Francisco Regional Water System (RWS) watersheds to an average annual of 265 mgd through 2018.

All 26 wholesale customers and San Francisco are subject to the ISL. The wholesale customers' collective allocation under the ISL is 184 mgd and San Francisco's is 81 mgd. Although the wholesale customers did not agree to the ISL, as further discussed below, the WSA provides a framework for administering the ISL.

Interim Supply Allocations

The Interim Supply Allocations (ISAs) refer to San Francisco's and each individual wholesale customer's share of the Interim Supply Limitation (ISL). On December 14, 2010, the SFPUC established each agency's ISA through 2018. In general, the SFPUC based the wholesale customer allocations on the lesser of the projected fiscal year 2017-18 purchase projections or Individual Supply Guarantees. The ISAs are effective only until December 31, 2018 and do not affect the Supply Assurance or the Individual Supply Guarantees, both discussed separately herein. San Francisco's ISA is 81 mgd.

As stated in the WSA, the wholesale customers do not concede the legality of the Commission's establishment of the ISAs and Environmental Enhancement Surcharge, discussed below, and expressly retain the right to challenge either or both, if and when imposed, in a court of competent jurisdiction.

Environmental Enhancement Surcharge

As an incentive to keep Regional Water System (RWS) deliveries below the ISL of 265 mgd, the SFPUC adopted an Environmental Enhancement Surcharge for collective deliveries in excess of the ISL effective at the beginning of fiscal year 2011-12. This volume-based surcharge would be unilaterally imposed by the SFPUC on individual wholesale customers and San Francisco retail customers, when an agency's use exceeds their ISA and when sales of water to the wholesale customers and San Francisco retail customers, collectively, exceeds the ISL of 265 mgd. Actual charges would be determined based on each agency's respective amount(s) of excess use over their ISA. To date, no Environmental Enhancement Surcharges have been levied.

7.2 Reliability by Year Type

Supply reliability examines the water supply outlook under different hydrologic conditions in five-year increments to 2030 under normal, dry year and multiple dry year conditions. Since the

wholesalers' water supplies are obtained from local and imported sources, each wholesaler's water supply is a function of the amount of precipitation that falls both locally and in the watersheds of the Sierra Nevada. The supply available is also a function of the facilities in place to develop the supply.

Evaluating the availability of existing and projected local water supplies requires an understanding of the driest periods that can reasonably be expected to occur. This evaluation considers how often drought events have occurred and whether they are frequent enough to warrant designing the utility's system to withstand them, how much existing supply is available during a drought, and what duration of drought is most critical to the system.

The reliability of the City's water supply depends on its vulnerability to seasonal or climatic water shortage affecting its suppliers. Single-dry and multiple-dry years are usually based on historic records of annual runoff from a particular watershed. A multiple-dry year drought is generally three or more consecutive years with the lowest average annual runoff. Since the City has multiple sources of water supplies (SFPUC, SCVWD, SBWR and groundwater), each individual supply is evaluated to assess its response to single year and multiple year droughts. Table 7-1A and B present the anticipated supply reliability for the City's two wholesale supplies. Recycled water supply from SBWR and groundwater production is expected to be consistent for all year types.

As discussed in Chapter 6, the City's Water Supply Augmentation Study recommended development of groundwater supplies and increased recycled water use to provide additional reliability. These sources can supplement the City's SFPUC and SCVWD supplies, which may not be available consistently in all year types.

Table 7-1A: SFPUC Supply Reliability

Table 7-1 Retail: Basis of Water Year Data			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000*	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	**% of Average Supply**
Average Year	2002		100%
Single-Dry Year	1977		90%
Multiple-Dry Years 1st Year	SFPUC Design Year		90%
Multiple-Dry Years 2nd Year	SFPUC Design Year		78%
Multiple-Dry Years 3rd Year	SFPUC Design Year		78%
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			
Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: Multiple versions of Table 7-1 are being used, this version represents supplies from SFPUC			

Table 7-1B: SCVWD Supply Reliability

Table 7-1 Retail: Basis of Water Year Data			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000*	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	**% of Average Supply**
Average Year	2002		100%
Single-Dry Year	1977		100%
Multiple-Dry Years 1st Year	1988		100%
Multiple-Dry Years 2nd Year	1989		100%
Multiple-Dry Years 3rd Year	1990		100%
Multiple-Dry Years 4th Year *Optional*	1991		100%
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			

Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

NOTES: Multiple versions of Table 7-1 are being used, this version represents supplies from SCVWD.

The City recognizes the need to revisit SCVWD supply reliability in future updates to the UWMP. SCVWD's Draft 2015 UWMP suggests that the ongoing drought results in lower supplies than any consecutive three-year period in the 1987 and 1992 drought; however, because information for the current drought has not been finalized, the City is relying on available historical data to complete the 2015 UWMP. The SCVWD Supply Reliability documented in this table is consistent with the approach used by the City for the 2010 UWMP.

Supply and Demand Assessment Table 7-2, Table 7-3 and Table 7-4 compare projected supply availability and projected demands for normal, single-dry and multiple-year conditions. As

indicated in each table, the City has sufficient demands to meet its projected demands in each year type.

Table 7-2: Normal Year Supply and Demand Comparison

Table 7-2 Retail: Normal Year Supply and Demand Comparison (HCF)					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals	8,182,619	9,497,577	11,078,279	12,071,021	12,165,321
Demand totals	5,378,209	6,788,615	7,937,642	9,086,888	10,216,035
Difference	2,804,410	2,708,962	3,140,637	2,984,133	1,949,286
NOTES:					

Table 7-3: Single Dry Year Supply Reliability

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	7,732,225	9,047,183	10,627,885	11,620,627	11,714,927
Demand totals	5,378,209	6,788,615	7,937,642	9,086,888	10,216,035
Difference (HCF)	2,354,016	2,258,567	2,690,243	2,533,738	1,498,892
NOTES:					

Table 7-4: Multiple Dry Year Supply Reliability

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	7,732,225	9,047,183	10,627,885	11,620,627	11,714,927
	Demand totals	5,378,209	6,788,615	7,937,642	9,086,888	10,216,035
	Difference (HCF)	2,354,016	2,258,567	2,690,243	2,533,738	1,498,892
Second year	Supply totals	7,191,751	8,506,709	10,087,411	11,080,153	11,174,453
	Demand totals	5,378,209	6,788,615	7,937,642	9,086,888	10,216,035
	Difference (HCF)	1,813,543	1,718,094	2,149,770	1,993,265	958,418
Third year	Supply totals	7,191,751	8,506,709	10,087,411	11,080,153	11,174,453
	Demand totals	5,378,209	6,788,615	7,937,642	9,086,888	10,216,035
	Difference (HCF)	1,813,543	1,718,094	2,149,770	1,993,265	958,418
NOTES:						

7.3 Regional Supply Reliability

7.3.1 SFPUC

The SFPUC's WSIP provides goals and objectives to improve the delivery reliability of the RWS, including water supply reliability. The goals and objectives of the WSIP related to water supply are:

- Program Goal
  - Water supply - Meet customer water needs in non-drought and drought periods
- System Performance Objectives
  - Meet average annual water demand of 265 mgd from the SFPUC watersheds for retail and wholesale customers during non-drought years for system demands through 2018.
  - Meet dry-year delivery needs through 2018 while limiting rationing to a maximum 20% system-wide reduction in water service during extended droughts.
  - Diversify water supply options during non-drought and drought periods.

- Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers.

The adopted WSIP had several water supply elements to address the WSIP water supply goals and objectives. The following provides the water supply elements for all year types and the dry-year projects of the adopted WSIP to augment all year type water supplies during drought.

Water Supply – All Year Types

The SFPUC historically has met demand in its service area in all year types from its watersheds, which consist of:

- Tuolumne River watershed
- Alameda Creek watershed
- San Mateo County watersheds

In general, 85% of the supply comes from the Tuolumne River through Hetch Hetchy Reservoir and the remaining 15% comes from the local watersheds through the San Antonio, Calaveras, Crystal Springs, Pilarcitos and San Andreas Reservoirs. The adopted WSIP retains this mix of water supply for all year types.

Water Supply – Dry-Year Types

The adopted WSIP includes the following water supply projects to meet dry-year demands with no greater than 20% system-wide rationing in any one year:

- Calaveras Dam Replacement Project - Calaveras Dam is located near a seismically active fault zone and was determined to be seismically vulnerable. To address this vulnerability, the SFPUC is constructing a new dam of equal height downstream of the existing dam. The Environmental Impact Report was certified by the San Francisco City Planning Commission in 2011, and construction is now ongoing. Construction of the new dam is slated for completion in 2018; the entire project should be completed in 2019.
- Alameda Creek Recapture Project -The Alameda Creek Recapture Project will recapture the water system yield lost due to instream flow releases at Calaveras Reservoir or bypassed around the Alameda Creek Diversion Dam and return this yield to the RWS through facilities in the Sunol Valley. Water that naturally infiltrates from Alameda Creek will be recaptured into an existing quarry pond known as SMP (Surface Mining Permit)-24 Pond F2. The project will be designed to allow the recaptured water to be pumped to the Sunol Valley Water Treatment Plant or to San Antonio Reservoir. The project's Draft Environmental Impact Report will be released in the spring of 2016, and construction will occur from spring 2017 to fall 2018.
- Lower Crystal Springs Dam Improvements - The Lower Crystal Springs Dam Improvements were substantially completed in November 2011. While the project has been completed, permitting issues for reservoir operation have become significant. While the reservoir elevation was lowered due to Division of Safety of Dams restrictions, the habitat for the Fountain Thistle, an endangered plant, followed the lowered reservoir elevation. Raising the reservoir elevation now requires that new plant populations be restored incrementally before the reservoir elevation is raised. The result is that it may be several years before the original reservoir elevation can be restored.

- Regional Groundwater Storage and Recovery Project - The Groundwater Storage and Recovery Project is a strategic partnership between SFPUC and three San Mateo County agencies: the California Water Service Company (serving South San Francisco and Colma), the City of Daly City, and the City of San Bruno. The project seeks to balance the management of groundwater and surface water resources in a way that safeguards supplies during times of drought. During years of normal or heavy rainfall, the project would provide additional surface water to the partner agencies in San Mateo County, allowing them to reduce the amount of groundwater that they pump from the South Westside Groundwater Basin. Over time, the reduced pumping would allow the aquifer to recharge and result in increased groundwater storage of up to 20 billion gallons.

  The project's Final Environmental Impact Report was certified in August 2014, and the project also received Commission approval that month. The well station construction contract Notice to Proceed was issued in April 2015, and construction is expected to be completed in spring 2018.

- 2 mgd Dry-year Water Transfer - In 2012, the dry-year transfer was proposed between the Modesto Irrigation District and the SFPUC. Negotiations were terminated because an agreement could not be reached. Subsequently, the SFPUC is having ongoing discussions with the Oakdale Irrigation District for a one-year transfer agreement with the SFPUC for 2 mgd (2,240 acre-feet).

In order to achieve its target of meeting at least 80% of its customer demand during droughts at 265 mgd, the SFPUC must successfully implement the dry-year water supply projects included in the WSIP.

Furthermore, the permitting obligations for the Calaveras Dam Replacement Project and the Lower Crystal Springs Dam Improvements include a combined commitment of 12.8 mgd for instream flows on average. When this is reduced for an assumed Alameda Creek Recapture Project recovery of 9.3 mgd, the net loss of water supply is 3.5 mgd. The SFPUC's participation in regional water supply reliability efforts, such as the Bay Area Regional Desalination Project (BARDP), additional water transfers, and other projects may help to make up for this shortfall.

Projected SFPUC Regional Water System Supply Reliability

The SFPUC provided tables presenting the projected RWS supply reliability (see Appendix C). These tables assume that the wholesale customers purchase 184 mgd from the RWS through 2040 and the implementation of the dry-year water supply projects included in the WSIP. The numbers represent the wholesale share of available supply during historical year types per the Tier One Water Shortage Allocation Plan (WSAP) (see Section 8.10 for additional information). This table does not reflect any potential impact to RWS yield from the additional fishery flows required as part of Calaveras Dam Replacement Project and the Lower Crystal Springs Dam Improvements Project.

Impact of Recent SFPUC Actions on Dry-Year Reliability

As noted earlier, in adopting the Calaveras Dam Replacement Project and the Lower Crystal Springs Dam Improvements Project, the SFPUC committed to providing fishery flows below Calaveras Dam and Lower Crystal Springs Dam, as well as bypass flows below Alameda Creek Diversion Dam. The fishery flow schedules for Alameda Creek and San Mateo Creek represent a potential decrease in available water supply of an average annual 9.3 mgd and 3.5 mgd, respectively with a total of 12.8 mgd average annually. The Alameda Creek Recapture Project, described above, will replace the 9.3 mgd of supply lost to Alameda Creek fishery flows.

Therefore, the remaining 3.5 mgd of fishery flows for San Mateo Creek will potentially create a shortfall in meeting the SFPUC demands of 265 mgd and slightly increase the SFPUC's dry-year water supply needs.

The adopted WSIP water supply objectives include (1) meeting a target delivery of 265 mgd through 2018 and (2) rationing at no greater than 20% system-wide in any one year of a drought. As a result of the fishery flows, the SFPUC may not be able to meet these objectives between 2015 and 2018. Participation in the BARDP and additional water transfers, as described earlier, may help manage the water supply loss associated with the fishery flows.

As a result of the Individual Supply Guarantees described above, the SFPUC has a responsibility to provide 184 mgd to its wholesale customers in perpetuity, regardless of demand. Therefore, the current projections for purchase requests through 2018 remain at 265 mgd, which includes wholesale and retail demand. However, in the last decade including the current drought, SFPUC deliveries have been below this level, as illustrated in the table below.

Water Deliveries in San Francisco Regional Water System Service Area[1]

Fiscal Year	Total Deliveries (mgd)
2005-06	247.5
2006-07	257.0
2007-08	254.1
2008-09	243.4
2009-10	225.2
2010-11	219.9
2011-12	220.5
2012-13	223.9
2013-14	222.3
2014-15	196.0

Under the current drought to date, the SFPUC has called for, but has not mandated, a 10% system-wide reduction since January 2014. The SFPUC has not yet been compelled to declare a water shortage emergency and impose mandatory system-wide rationing because its customers have exceeded the 10% voluntary system-wide reduction in conjunction with the state-wide mandatory reductions assigned by the State Water Resources Control Board. If current drought conditions worsen between 2015 and 2018, and the SFPUC determines that system-wide rationing would need to be imposed, then the SFPUC would issue a declaration of a water shortage emergency in accordance with Water Code Section 350 and implement rationing in accordance with the WSA and WSAP as described above.

[1] Reference: SFPUC FY 9-10 and FY 2014-15 J-Tables Line 9 "Total System Usage" plus 0.7 mgd for Lawrence Livermore National Laboratory use and 0.4 mgd for Groveland. No groundwater use is included in this number. Non-revenue water is included.

7.3.2 SCVWD

To maintain water supply reliability and flexibility, SCVWD's water supply includes a variety of sources including local groundwater, imported water, local surface water, and recycled water. SCVWD has an active conjunctive water management program to optimize the use of groundwater and surface water, and to prevent groundwater overdraft and land subsidence.

Long-term planning and modeling analysis performed by SCVWD as part of its Integrated Water Resources Planning Study (IWRP) indicates that if additional investments are made, future countywide demands can reliably be met. It is the intent of SCVWD to invest in accordance with the IWRP framework to develop a flexible resource mix. This flexibility will allow SCVWD to respond to uncertain future conditions.

SCVWD's first IWRP report, completed in 1997, identified alternative water resource strategies and ranked them against planning objectives that ultimately resulted in a final preferred strategy. That strategy identified three programs corresponding to a range of future water shortage levels, with components phased in over time, based on demand.

The 2003 IWRP developed a planning framework and supporting modeling tools to help SCVWD identify and select specific water resource investments. The 2003 IWRP evaluation was based on a best estimate of the water demand and water supply outlook through 2040. Future water demand was estimated based on data from ABAG, Department of Finance and general plans from cities and Santa Clara County. The demand projection for the cities in Santa Clara County did not distinguish between SCVWD or SFPUC supplies.

The key findings from the 2003 IWRP are: 1) securing baseline supplies is top priority for ensuring reliability, 2) a mix of three types of new water supply investments makes the best water supply portfolio, and 3) local supplies decrease vulnerability.

Based upon the findings above, the IWRP 2003 provides three recommendations to ensure reliability through 2040.

1. Secure the Baseline

SCVWD's baseline includes existing water supplies, infrastructure, and programs, including the groundwater basins, reservoirs, imported water supplies, water rights, water use efficiency programs, and water utility infrastructure. The key steps to secure this baseline supply and SCVWD's progress are summarized below:

- Improve infrastructure reliability - SCVWD is evaluating the condition of its water treatment plants and distribution system and is rehabilitating aging or defective components. Improving local infrastructure is vital to ensuring reliability of both the water treatment and conveyance systems during emergencies.
- Expand groundwater management - Local groundwater basins supply nearly half of the water used annually in Santa Clara County and also provide emergency reserve for droughts or outages. SCVWD is considering development of SCVWD-owned groundwater extraction facilities to utilize this resource during emergencies -- particularly during outages of the treated water system -- and to maximize conjunctive use opportunities.
- Sustain existing supplies - SCVWD is protecting imported water supplies by resolving contract and policy issues, supporting Bay-Delta system improvements, resolving the San Luis Reservoir low-point problem, and supporting SFPUC efforts to implement a Capital Improvement Program to secure the long-term reliability of SFPUC supplies in the County.

SCVWD is protecting local water supplies by maintaining local water rights and protecting the local groundwater basins.

- Reaffirm commitments to water conservation and recycling -SCVWD is investing in conservation and recycling, as demonstrated by its water conservation programs and investment into the Silicon Valley Advanced Water Purification Center.
- Continue to provide clean, safe drinking water **-** SCVWD has an aggressive source water protection program to meet and exceed water quality standards by conducting ongoing improvements to treatment facilities.

2. Implement the "No Regrets" Portfolio for Near-Term Reliability (Phase I)

IWRP 2003 identified a "No Regrets" investment portfolio to ensure reliability through about 2020. With these investments, potential shortages through about year 2020 are reduced to levels that can be managed through contingency planning and response, including spot market transfers or demand management measures. IWRP 2003 stakeholders endorsed the No Regrets portfolio, which calls for the following new near-term investments:

- 28,000 AF of additional annual savings from agricultural, and municipal and industrial conservation.
- 20,000 AF of additional groundwater recharge capacity.
- 60,000 AF of additional capacity in the Semitropic Water Bank.

3. Flexible Options for Long Term Planning

Critical steps to ensure long-term water supply reliability include monitoring for risks, new opportunities, and technology improvements, further investigating desalination feasibility and recycled water acceptance and marketability, exploring potential water management and water quality improvement alternatives, and maximizing external funding.

SCVWD finds that its water supply will reliably meet future countywide demands. Although this UWMP presents projections of future water supply by source, ongoing coordination with SCVWD will be necessary to ensure projections are consistent with SCVWD's long-term water management strategies. The City will continue to work with SCVWD to refine future water supply projections and ensure long-term planning efforts are consistent.

The District's more recent 2012 Water Master Plan includes developing 20,200 AFY of potable reuse capacity. The current plan is that water would be purified at an expanded purification center in Alviso, piped to the District's Los Gatos Recharge System, and used for groundwater recharge. The District's Expedited Purified Water Program is currently evaluating an expanded and expedited potable reuse program that could include up to a total of 45,000 AFY of potable reuse capacity.

7.3.3 WPCP

Since WPCP can generate excess recycled water beyond that which is being used, recycled water is considered drought proof and the supply reliability is considered to be stable even during drought periods.

7.4 Water Quality

The City does not anticipate any water quality impacts concerns related to its current or projected water supplies aside from potential customer taste and odor concern associated with the

introduction of groundwater. As discussed in Section 6.2, in-pipe blending is anticipated to address this water quality concern.

Chapter 8 Water Shortage Contingency Planning

8.1 Stages of Action

Table 8-1 shows the City's four-stage rationing plan that could be invoked during declared water shortages. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage. Moving from one stage to another requires City Council's approval.

Table 8-1: Stages of Water Shortage Contingency Plan

Table 8-1 Retail Stages of Water Shortage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition (*Narrative description)*
Add additional rows as needed		
0	0%	Voluntary
1	5-20%	Voluntary
2	20-35%	Mandatory
3	35-50%	Mandatory
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

Stage 0, or a 0% shortage

Requires no forced conservation measures, however water conservation is always encouraged with resources available to the public to assist in water conservation. This stage represents the "normal" water supply condition.

Stage 1, 5-20% shortage

Continues the Stage 0 activities and in addition could increase public outreach and optimize the draw from wholesalers, such as mixing water supplies to subsidize the supply facing the shortage or temporarily shift service area boundaries.

Stage 2, 20-35% shortage

Continues the Stage 1 activities and in addition would include the possibility of supplemental water supplies, such as increasing the number or production of the City's wells, as well as the possibility of implementing a rationing program, which is discussed later in this chapter.

Stage 3, 35-50% shortage

Continues the Stage 2 activities and in addition could include the further expansion of the recycled water system. This option is costly and time consuming to implement and therefore would depend on the anticipated duration of the water supply shortage.

8.2 Prohibitions on End Uses

The City is currently in Stage 2 of its water supply contingency plan. Table 8-2 lists various prohibitions at different stages that would be imposed upon residents and businesses as mechanisms to reduce water use. No penalties, charges, or other enforcement are included in this plan. Staff will include recommendations at the time Council is considering moving to a different stage.

Table 8-2: Restrictions and Prohibitions on End Uses

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference (optional)	Penalty, Charge, or other Enforcement?
0	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
0	Landscape - Restrict or prohibit runoff from landscape irrigation		No
0	Other - Require automatic shut off hoses	Washing automobiles with hoses not equipped with a shut-off nozzle	No
0	Other - Prohibit use of potable water for washing hard surfaces	Sidewalks, driveways, streets, parking lots, etc.	No
0	CII - Restaurants may only serve water upon request		No
0	CII - Other CII restriction or prohibition	Using cooling system equipment not	No

		equipped to recycle at least 50% of the water	
0	Landscape - Prohibit certain types of landscape irrigation	Using potable water for irrigation if recycled water is available	No
0	Water Features – Restrict water use for decorative water features, such as fountains	Using decorative fountains not equipped with a recycled water system or using non-recirculated water	No
0	Landscape - prohibit certain types of landscape irrigation	Application of potable water to any outdoor plants, lawn, grass, landscaping, or turf area during and within forty-right (48) hours after measureable rainfall	No
0	Landscape - Other landscape restriction or prohibition	Newly constructed homes and buildings shall be designed with drip or microspray irrigation systems	No
0	Landscape - Prohibit certain types of landscape irrigation	Application of potable water to street medians containing ornamental turf using spray heads, drip system is exempt	No
1	Other	Hydrant flushing, except for public health and safety	No
1	Other - Prohibit use of potable water for construction and dust control	Compaction, sweeping, etc.	No
2	Landscape - Other landscape restriction or prohibition	Use of potable water to irrigate golf courses, except greens and tees	No

2	Landscape - Limit landscape irrigation to specific times	Use of potable water for watering or irrigation of any plants, lawn, grass, landscaping, or turf areas for no more than two (2) days during any seven (7) day period. The days of watering shall be: -Address ending in Odd Number, Monday and Thursday -Address ending in Even Number, Tuesday and Friday - No address, Monday and Thursday	No
3	Other - Washing vehicles except at commercial washing facilities using recycled or recirculating water		No
3	CII - Lodging establishment must offer opt out of linen service		No
3	Pools and spas - Require covers for pools and spas	Pools and spas shall be covered when not in use to prevent evaporation	No
3	Landscape - Other landscape restriction or prohibition	Use of potable water for installation of new landscape unless served by recycled water	No
3	Other water feature or swimming pool restrictions	New construction of swimming pools, ponds, or decorative water features, such as fountains	No
3	Landscape - Prohibit certain types of landscape irrigation	Application of potable water to street median landscape strips	No

3	Water Features – Restrict water use for decorative water features, such as fountains	Use of potable water for cleaning, filling, or operating water features, such as decorative fountains	No

8.3 Penalties, Charges, Other Enforcement of Prohibitions

Adoption of mandatory prohibitions (Stages 2 and 3) would require the following actions:

- Trigger: Either or both water suppliers declare a water shortage emergency of 20% or more. This would trigger development of a draft ordinance establishing rules, regulations and restrictions for water use.
- Public Input: The City is required to solicit public comment on a draft ordinance through a City Council public hearing. (Refer to Appendix D for sample public hearing notice) Adjustments would be incorporated as directed by City Council.
- Adoption: City Council would consider adopting ordinances. See Section 8.7 for further information.
- Enforcement: The City will determine enforcement measurements for prohibitions as needed to be in accordance with City codes and ordinances.

8.3.1 Drought Experience

During the current drought, in response to the Governor's Executive Order, both SFPUC and SCVWD implemented water use reduction targets for their retailers. The City also implemented water use reduction targets to adhere to the Order and added temporary staff to address conservation outreach and enforcement as required by the Governor's Executive Order.

Drought periods cause increasing expenses. Conservation program costs such as rationing implementation, tracking and billing, educational information dissemination, and program management all result in expense increases. The 1988-1993 drought program management was estimated requiring 24 hours per week of billing department staff time and 100 hours per week of engineering staff time. Excluding staff time, the City spent approximately $870,000 managing rationing during the 1988-1993 drought period.

Milpitas residents have demonstrated their continued water conservation ethic through both fixtures and behavior. Fixtures in new dwelling units are water efficient, reducing waste. These measures, in addition to irrigation system conversion to recycled water, reduce the discretionary potable water use that can be reduced in future droughts.

8.4 Consumption Reduction Methods

For future droughts, the City may consider using one or a combination of the methods described in Appendix E. Since every drought is unique, the City does not pre-determine a set procedure for managing a drought. Rather, City staff would evaluate the drought situation, consider the pros and cons for each of the rationing methods, and recommend to City Council a course of action to manage the drought. Table 8-3 presents the stages of water consumption reduction methods.

Table 8-3: Consumption Reduction Methods

Table 8-3 Retail Only: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference *(optional)*
Add additional rows as needed		
1	Expand Public Information Campaign	
2	Other	Declare Mandatory Water Consumption Reduction Methods
3	Other	Increase Mandatory Water Consumption Reduction Methods
NOTES:		

8.5 Determining Water Shortage Reductions

The City's utility billing system tracks water usage by user categories (i.e. single-family, commercial, irrigation). Data is easily accessible and customized reports can be printed or downloaded to spreadsheet format. Meters are currently read every two months. The City intends to transition to smart meter reads in the future.

To determine actual reductions during a water shortage emergency, staff can review readings from wholesale turnout meters and compare to historical readings, review monthly water use reports by user categories and compare to historical use, or extract data from the utility billing system and manipulate accordingly to obtain the data needed.

8.6 Revenue and Expenditure Impacts

One consequence of water rationing is a loss in revenues due to the decrease in the quantity of water sold. Expenses also increase due to costs associated with managing a drought program. Temporary funding may be used from 30% operating budget water fund reserves (roughly $4 million) which are available for the dual purpose of providing funds for emergency operations and for mitigating the financial impacts of a drought. However, a rate increase is inevitable as reserves must be replenished.

8.7 Resolution or Ordinance

Appendix F contains the water rate ordinance that the City adopted December 15, 2015, and Appendix G contains a sample Water Shortage Emergency Restrictions Ordinance. A similar urgency ordinance, Ordinance No. 240.3, was enacted and adopted by the City Council in June

of 2015 in response to the current drought. The penalty structure adopted in Ordinance No. 240.3 was later amended.

8.8 Catastrophic Supply Interruption

Catastrophic events include non-drought related events. The City's 2004 Water Emergency Management Plan addresses two possible events that could be triggered by any of the following threats: earthquakes, floods, waterborne diseases, backflow conditions, chemical spills, construction accidents, contamination of water storage tank, fires, mechanical equipment disabled, power outages, sewage spills, terrorism, theft of materials, and vandalism.

- Water Shortage Event **-** An event (non-drought) where there is not enough water supplied to meet the normal demands of the City.
- Water Contamination Event **-** An event where the water quality may not meet Safe Drinking Water Standards and water use is curtailed. This may include contamination from the wholesale source, external contamination, or this may include contamination within the City's system, internal contamination. For either source of water, the contamination must be isolated via water valves and depending on the severity and duration of the contamination a secondary means (bypass) or source of water (wells, different wholesaler) must be put in place.

8.8.1 Water Shortage Event Action Items

In the event of a water shortage, depending on the scenario, Staff intends to address the problem, however is not limited to, the following action items as necessary.

Scenario 1: ONE water wholesaler has a full or partial shutdown of turnout supplies.

- Public notification
- Fill as many reservoirs as possible before supply is lost
- Request opening of the emergency wholesale intertie
- Fill Gibraltar reservoir from the unaffected water service (Gibraltar has two reservoirs that can be filled from either source)
- Request emergency water service from neighboring interties with ACWD or SJWC
- Draw increased supplies from wells (only in the event of long-term water loss)

Scenario 2: BOTH water wholesalers have a full or partial shutdown of turnout supplies.

- Public notification
- Fill as many reservoirs as possible (short-term water loss)
- Draw increased supplies from wells (long-term water loss)

8.8.2 Water Contamination Event Action Items

Actions the City may take depend on the specifics of the event, but the plan calls for some or all of the following:

Scenario 1: Water contaminated from the wholesaler (external).

- Public notification in accordance with State Department of Drinking Water requirements

- Close off valves to isolate contaminated water from entering municipal system
- Assuming only ONE wholesaler is contaminated, fill the reservoirs with the unaffected wholesaler's water
- Assuming only ONE wholesaler is contaminated, open inter-ties between wholesale agencies
- Assuming only ONE wholesaler is contaminated, request emergency water service from neighboring interties with ACWD or SJWC
- Draw from City wells (long-term water loss)
- Assuming BOTH wholesalers contaminated, contact bottled water companies for temporary water supply
- Request assistance though the Water and Wastewater Agency Response Network (WARN) agreement

Scenario 2: Water contaminated within the municipal system (internal)

- Public notification
- Issue boil water notice (if biological contamination only)
- Begin to purge contaminated water, if possible
- Provide water via uncontaminated reservoir
- Contact bottled water companies for temporary water supply
- Continue monitoring until Safe Drinking Water Standards are achieved
- Request assistance through WARN agreement

8.9 Minimum Supply Next Three Years

Table 8-4 provides an estimate of the minimum supply available for the next three years. Note that this estimate differs from the multiple dry year scenarios presented in Section 7.2. This minimum supply projection is more conservative assuming current reduction in SCVWD supplies continues.

Table 8-4: Minimum Supply Next Three Years

Table 8-4 Retail: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply (HCF)	4,192,701	4,192,701	4,192,701
NOTES: As the City of Milpitas is currently experiencing a multi-dry year period and its wholesaler, SCVWD, has decreased the City's supply to 80%, minimum supply for the next year would be the same as current supply. This also assumes that neither groundwater nor recycled water supplies increase.			

8.10 SFPUC Shortage Allocation Plan

8.10.1 Tier One Drought Allocations

In July 2009, the wholesale customers and San Francisco adopted the Water Supply Agreement (WSA), which includes a Water Shortage Allocation Plan (WSAP) to allocate water from the Regional Water System (RWS) to retail and wholesale customers during system-wide shortages of 20% or less (the Tier One Plan). The WSAP has two components:

- The Tier One Plan: Allocates water between San Francisco and the wholesale customers collectively
- The Tier Two Plan: Allocates the collective wholesale customer share among the wholesale customers

The Tier One Plan allocates water between San Francisco and the wholesale customers collectively based on the level of shortage:

Level of System-Wide Reduction in Water Use Required	Share of Available Water	
	SFPUC Share	Wholesale Customers Share
5% or less	35.5%	64.5%
6% through 10%	36.0%	64.0%
11% through 15%	37.0%	63.0%
16% through 20%	37.5%	62.5%

The Tier One Plan allows for voluntary transfers of shortage allocations between the SFPUC and any wholesale customer and between wholesale customers themselves. In addition, water "banked" by a wholesale customer, through reductions in usage greater than required, may also be transferred.

The Tier One Plan will expire at the end of the term of the WSA in 2034, unless mutually extended by San Francisco and the wholesale customers.

The Tier One Plan applies only when the SFPUC determines that a system-wide water shortage exists and issues a declaration of a water shortage emergency under California Water Code Section 350. Separate from a declaration of a water shortage emergency, the SFPUC may opt to request voluntary cutbacks from San Francisco and the wholesale customers to achieve necessary water use reductions during drought periods. During the current drought to date, the SFPUC has requested, but has not mandated, a 10% system-wide reduction since January 2014. The SFPUC has not yet been compelled to declare a water shortage emergency and implement the Tier One Plan because its customers have exceeded the 10% voluntary system-wide reduction in conjunction with the state-wide mandatory reductions assigned by the State Water Resources Control Board.

8.10.2 Tier Two Drought Allocations

In 2010, the wholesale customers negotiated and adopted the Tier Two Drought Implementation Plan (Tier Two Plan), which allocates the collective wholesale customer share among each of the 26 wholesale customers. This Tier Two Plan allocation is based on a formula that takes into account multiple factors for each wholesale customer including:

- Individual Supply Guarantee;
- Seasonal use of all available water supplies; and
- Residential per capita use.

The water supplies made available from the SFPUC will be allocated to the individual wholesale customers in proportion to each wholesale customer's Allocation Basis, expressed in millions of gallons per day (mgd), which in turn is the weighted average of two components. The first component is the fixed wholesale customer's Individual Supply Guarantee as stated in the WSA. The second component is the Base/Seasonal Component, which is variable and is calculated using each wholesale customers total monthly water use from all available water supplies during the three consecutive years prior to the onset of the drought. The second component is accorded twice the weight of the first component in calculating the Allocation Basis. Minor adjustments to the Allocation Basis are then made to ensure a minimum cutback level, a maximum cutback level, and a minimum level of supply to meet health and safety needs for certain wholesale customers.

Each wholesale customer's Allocation Factor, which represents its percentage allocation of the total available water supplies, is calculated from its proportionate share of the total of all wholesale customers' Allocation Bases. The final shortage allocation for each wholesale customer is determined by multiplying the amount of water available to the wholesale customers' collectively under the Tier One Plan, by the wholesale customer's Allocation Factor.

The Tier Two Plan requires that the Allocation Factors be calculated by BAWSCA each year in preparation for a potential water shortage emergency. As the wholesale customers change their water use characteristics (e.g., increases or decreases in SFPUC purchases and use of other water sources, changes in monthly water use patterns, or changes in residential per capita water use), the Allocation Factor for each wholesale customer will also change.

For long-term planning purposes, each wholesale customer has been provided with the Tier Two Allocation Factors calculated by BAWSCA based upon the most recent normal year to determine its share of available RWS supplies. However, actual allocations to each wholesale customer during a future shortage event will be calculated in accordance with the Tier Two plan at the onset of the shortage.

The current Tier Two Plan will expire in 2018 unless extended by the wholesale customers.

8.11 SCVWD Water Shortage Contingency Plan

SCVWD's Water Shortage Contingency Plan focuses on drought risk, based on the range of hydrologic conditions observed in the past. Risks from water supply shortages include overdrafting Santa Clara County's groundwater basin and experiencing land surface subsidence. In addition to the permanent loss of aquifer storage, land surface subsidence can damage infrastructure and lower the land elevation along the County's many rivers and streams, resulting in greater backwater influences from the saline San Francisco Bay and greater flooding risks among densely developed urban areas.

Supply shortages to the County can result in overdrafting of the groundwater basin. Although SCVWD manages the County's groundwater basin, the groundwater is pumped by major retailers and independent users. SCVWD can influence groundwater pumping through pumping charges and other management practices, but it cannot directly control the amount of groundwater pumped. The groundwater basin is a complex and non-homogeneous system and the natural groundwater yield, groundwater operational storage, and land subsidence threshold are uncertain.

Groundwater end-of-year carryover storage is the best indicator to evaluate the overall water supply picture. When the operational storage in the groundwater sub-basins drops below 300,000 AF the following year may be at risk of water shortage. Table 8-5 summarizes the recommended shortage response guidelines for different expected end-of-year groundwater carryover storage.

Table 8-5: SCVWD Shortage Response Action Guidelines

Stage	Stage Title	Projected End-of-Year Groundwater Storage	Requested Short-Term Water Use Reduction	Actions
Stage 1	Normal	Above 300,000 AF	None	The District continues ongoing outreach strategies aimed toward achieving long-term water conservation targets. Messages in this stage focus on services and rebate programs the District provides to facilitate water use efficiency for residents, agriculture, and business. While other stages are more urgent, successful outcomes in Stage 1 are vital to long-term water supply reliability.

Stage	Stage Title	Projected End-of-Year Groundwater Storage	Requested Short-Term Water Use Reduction	Actions
Stage 2	Alert	250,000 – 300,000 AF	0 – 10%	This stage is meant to warn customers that current water use is tapping groundwater reserves. Coordinate ordinances with cities and prepare for a Stage 3 situation. Additional communication tools can be employed to augment Stage 1 efforts, promote immediate behavioral changes, and set the tone for the onset of shortages. Specific implementation plans will be developed when a worsening of the water shortage has occurred. Supplemental funding may be identified to augment budgeted efforts.
Stage 3	Severe	200,000 – 250,000 AF	10 – 20%	Shortage conditions are worsening, requiring close coordination with retailers and cities to enact ordinances and water use restrictions. Requires significant behavioral change by water users. The intensity of communication efforts will increase as the severity of shortage increases. Messages are modified to reflect for dire circumstances.
Stage 4	Critical	150,000 – 200,000 AF	20 – 40%	This is the most severe stage in a multiyear drought. The District will expand Stage 3 activities and encourage retailers and cities to enforce their water shortage contingency plans, which could include fines for repeated violations.
Stage 5	Emergency	Below 150,000 AF	50%	Stage 5 of the water shortage contingency plan is meant to address an immediate crisis such as a major infrastructure failure. Water supply would only be available to meet health and safety needs. The District would activate its EOC and provide daily updates on conditions.

Chapter 9 Demand Management Measures

9.1 Demand Management Measures for Retail Agencies

9.1.1 Water waste prevention ordinances

The City's water waste prevention ordinance is in place and prohibitions are included in response to shortages. The Water Waste Ordinance which is currently in effect (Ordinance 240.4 attached as Appendix H) reflects Stage 2 restrictions. When the current drought is over, the City will likely adopt a new ordinance repealing Stage 1 and 2 restrictions and returning to Stage 0.

9.1.2 Metering

The City maintains water use information for residential, commercial, industrial, institutional/governmental, and irrigation (potable and recycled) water users. All customer accounts are metered. Table 4-1 gives actual water deliveries for 2015.

9.1.3 Conservation pricing

The City water rate structure is consistent with a recent consultant report.

9.1.4 Public education and outreach

The City conducts its conservation program in conjunction with resources provided by SCVWD and BAWSCA. Programs implemented through the partnerships with these agencies may include free showerheads and aerators, the Irrigation Hardware Upgrades Rebate Program, Landscape Conversion Rebate Program, High Efficiency Clothes Washer Rebate Program, High Efficiency Toilet Rebate Program, Graywater Laundry to Landscape Rebates and Water Wise House Calls and Water Efficient Gardening workshops. The City contributes to fund these programs indirectly through wholesale water costs and wastewater treatment purchases. The City also distributes educational information to schools, various fairs and other public events. Conservation related workshops and opportunities are also posted on the City's website as well as drought information.

9.1.5 Programs to assess and manage distribution system real loss

City maintenance crews investigate and repair water leaks. The majority of leaks occur in service laterals. Long-term plans to reduce water loss include:

- Replace existing meters with smart meters
- Implement supervisory control and data acquisition system (SCADA)
- Replace selected water pipe with upgraded design criteria to withstand seismic events
- Maintain an active cathodic protection system

9.1.6 Water conservation program coordination and staffing support

As part of the City's response to the ongoing drought, the City recently established a temporary Water Conservation Program. The program was structured to facilitate and respond to reports of water waste and violations of local water use restrictions. It also provides an opportunity to educate home and business owners on water conservation. To facilitate the community's ability to report water waste, various reporting options were developed including email, a water–waste hotline, the City's website and through a mobile application. The Water Conservation Coordinator is:

Mike Rocha, Administrative Analyst
1265 N. Milpitas Blvd
Milpitas, CA 95035
(408) 586-2629
mrocha@ci.milpitas.ca.gov

9.2 Implementation over the Past Five Years

The following water demand management measures have been implemented to achieve water use targets.

Water Survey Programs for Single Family and Multiple-Family Residential Customers

SCVWD developed this program to target and market home water-use surveys to single-family and multi-family residential customers of participating water retailers including the City of Milpitas. The water surveys consist of educating customers on how to read their water meter; checking flow rates of showerheads, faucet aerators and toilets; checking for leaks; installing low-flow showerheads, aerators, and/or toilet flappers if necessary; checking irrigation system efficiency; measuring landscaped area; developing an efficient irrigation schedule for the different seasons; and providing customers with evaluation results, water savings recommendations, and other education materials. Recently the program was enhanced for increased program efficiency and participation by using landscape measurements, from this program as an initial qualifying step for the Landscape Rebate program. The City communicates these programs to all Milpitas residents through newsletter distribution, local advertisements, and City media.

Residential Plumbing Retrofit

SCVWD has provided free low-flow showerheads and faucet aerators to Santa Clara County residents via its water retailers, residential water surveys, and public events. City staff offers these free water-saving devices to Milpitas residents via distribution at city-sponsored events, City media, and residential newsletters. In addition to the showerheads and aerators directly distributed by SCVWD, the City has distributed thousands of low-flow showerheads and aerators.

System Water Surveys, Leak Detection and Repair

All connections within the City are metered, except for some City maintenance activities such as street sweeping, fireflow testing, and sewer hydro/vac truck filling. To minimize leaks from residential, business, and irrigation connections, City maintenance crews replace all leaking meters, repair water service and main leaks, and calibrate compound or multi-head meters annually. The City will continue to conduct its meter calibration and replacement program.

This 2015 UWMP included a water loss audit estimating distribution system losses (see Section 4.1.17).

Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections

All water connections in the City are metered, and separate irrigation meters are required for non-residential customers and new large-scale multi-family developments. Commercial, industrial, and institutional customers are required to have fire sprinkler systems with separate meters. The City has also installed separate meters for recycled water services. Rebates for the installation of submeters as well as switching from a mixed-use meter to a dedicated landscape meter are offered through SCVWD. The submeter program provides $150 per submeter installed at multi-family housing complexes.

The City will continue to install and read meters for all new services.

Landscape Rebate Program Conversion Rebates

SCVWD began to focus on water efficient landscapes by launching a program in early 2005. The original program offered rebates to residential and commercial sites for the replacement of approved high water using landscape with low water use plants, mulch and permeable hardscape. Participants could receive up to $0.75 per square foot of irrigated turf grass with a maximum rebate of $1000 and $10,000 for residential and commercial sites respectively. In an effort to expedite program participation, the Districts Board approved doubling the maximum rebate from $1000 up to $2000 for residents and from $10,000 up to $20,000 for commercial sites in 2009. Currently, Santa Clara County single family, multi-family and business properties with qualifying high water using landscape can receive rebates for converting to qualifying low water using landscape with a minimum of 50% qualifying plant coverage, 2 to 3 inches of mulch, and a conversion from overhead irrigation to drip/micro spray/bubbler or no irrigation. In January 2014, the Landscape Conversion rebate was increased from $.75 per square foot to $1.00 per square foot. However, in April 2014, in direct response to the drought, the District's Board approved additional funding to the program to support a rebate of $2.00 per square foot. The District plans to continue to offer this rebate in the future in order to reach the region's long term water conservation goals.

Landscape Water Surveys

SCVWD has offered and provided large landscape water surveys. Landscape managers have been provided water-use analyses, scheduling information, in-depth irrigation evaluation, a site-specific water budget, and recommendations for affordable irrigation upgrades. Each site received a detailed report upon completion of the survey. Previously a stand-alone program, starting in 2015 the program was offered through the Landscape Water Use Evaluation Program. Participants from this program are encouraged to participate in the Landscape Rebate Program.

High-Efficiency Clothes Washers Rebate Program

SCVWD participates in the regional Bay Area Water Utility Clothes Washer Rebate Program which offers high-efficiency washer rebates in conjunction with PG&E. For the majority of 2015, a multi-tiered combined rebate was implemented to transition participants to more stringent fixture standards. Standards were then adjusted to only provide a rebate for qualifying Energy Star Most Efficient (ESME) washers at a combined rebate of $150. This maximum $150 rebate is planned to continue through 2016 for qualifying ESME washers only.

Public Information Programs

SCVWD operates an extensive public information program and associated schools program, which provide materials, speakers, and outreach activities to the general public. Outreach activities include publications and website development, public meetings, participation at community events, multi-media campaigns, inter-agency partnerships, corporate environmental fairs, professional trade shows, landscaping workshops and seminars. In addition to SCVWD's public information program, City staff also disseminates information to the public through City media, the City's annual Consumer Confidence Report, and City sponsored events.

School Education Programs

SCVWD has a full-time staff to coordinate the school education programs and contract with the Youth Science Institute for additional instructors and coordination. SCVWD provides free classroom presentations, puppet plays, and tours of district facilities to schools within the county.

The objective is to teach students about water conservation, water supply, watershed stewardship and flood protection. SCVWD also provides school curricula to area educators, including workbooks and videos, as well as hands-on training for teachers. Students range from pre-kindergarten through college. Included in the educational services is Project WET (Water Education for Teachers) to train teachers how to lead their own classroom activities to independently educate students on water-related topics into the future.

Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts

Custom/Measured Rebate Program

SCVWD's Custom or Measured Rebate program provides rebates for process, technology and equipment retrofits that save water. Unique projects that meet program requirements are eligible for a rebate of $4 per hundred cubic feet (ccf) of water saved after the first 100 ccf saved. In January 1014, rebates were temporarily increased to $8 per ccf to promote participation during the drought. SCVWD will continue to offer this program in the future in order to reach the region's long-term water conservation goals.

Commercial Toilet Program

SCVWD offered an Ultra Low Flush Toilet (ULFT) Rebate Program from 1992 to 1999. SCVWD then switched to a direct ULFT installation program. In FY 2005 the District switched to High-Efficiency Toilets (HETs) and recently initiated a urinal program to replace old flush valves. By the end of 2015, only the HET direct installed and valve replacement programs were still in effect and are planned to be continued to be offered in the future.

Commercial Washer Program

SCVWD and City of San Jose offered rebates for the replacement of high-efficiency clothes washer in laundromats, in tandem with the Custom or Measured Rebate Program. This program was then expanded throughout the county to include commercial machines installed in multi-family complexes. In July 2010, the District began issuing rebates only for those machines in the highest tier of water efficiency. The rebate amount was increased from $400 to $800, in 2014, in response to the drought. The program is expected to be phased out in 2016.

Wholesale Agency Assistance Program

SCVWD, through a unique cooperative partnership with its retailers, offers regional implementation of a variety of water conservation programs in an effort to permanently reduce water use in Santa Clara County. It continues to collaborate with water retailers to implement various water conservation programs on a regional basis, ensuring its long-term water supply reliability goals are met as well as assisting its water retailers in meeting their goals, including compliance with recent legislation calling for 20% reduction per capita water use by 2020.

Conservation Coordinator

As noted in Section 9.1, as part of the City's response to the ongoing drought, the City recently established a temporary Water Conservation Program.

Water Waste Prohibition

In May 1994, the City adopted a Water Conservation Ordinance No. 240, amended it in August 2005, and further amended it in August 2015. (Ordinance No. 240.4 see Appendix H), which describes water use prohibitions.

Residential Ultra-Low Flush Toilet (ULFT) Replacement Programs

Effective 1992, SCVWD offered various residential ULFT replacement programs for single-family and multi-family residences, in conjunction with 13 participating water retailers. In 2004, SCVWD shifted to a high-efficiency toilet (HET) program, which offered a rebate of $125. In response to California's new requirement, SCVWD implemented its strictest standard for HETs, in 2014. Only Premium HETs would qualify for the $125 rebate for the remainder of the program's lifespan. This program will be phased out in 2016 in order to reprioritize funds to other programs with greater opportunities for water savings.

9.3 Planned Implementation to Achieve Water Use Targets

As discussed in Chapter 5, the City has met its water use targets. The City will continue to promote SCVWD conservation programs to the community. Historically, participation in SFPUC and/or BAWSCA programs has been minimal but could be expanded if necessary.

9.4 Members of the California Urban Water Conservation Council

The City is not a signatory to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU) on water conservation since analysis indicates that to fully implement the BMPs would not be cost effective. Historically, the City selected BMPs that were cost-effective and reasonable in total cost.

The City will participate in all BMPs recommended by the CUWCC to some degree, either through City supported local programs or as part of regional programs. SCVWD and its major water retailers, including the City of Milpitas, enjoy a special cooperative partnership in the regional implementation of a variety of water conservation programs. The City of Milpitas participates in cost sharing for programs as shown in 9.2.

Chapter 10 Plan Adoption, Submittal, and Implementation

10.1 Notice of Public Hearing

The City placed a display ad in *The Milpitas Post* on February 26, 2016, notifying residents and businesses of its intention to modify the UWMP (see Table 10-1). The City placed public hearing notices in *The Milpitas Post* on Friday, May 20, 2016, and May 27, 2016, and provided a draft UWMP available for public review at City Hall, and on the City's website at http://www.ci.milpitas.ca.gov/milpitas/departments/public-works/water-sewer-storm-system-maintenance/urban-water-management-plan/. A copy of public notifications can be found in Appendix A.

Additionally, the City provided notice to Santa Clara County with 60-day notice of the City's intent to review the UWMP and consider amendments to the Plan (see Table 10-1).

Table 10-1: Notification to Cities and Counties

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
City of Milpitas	☑	☑
	☐	☐
	☐	☐
County Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Santa Clara County	☑	☑
	☐	☐

10.2 Public Hearing and Adoption

The City Council held a public hearing on June 7, 2016 after which the Council adopted a resolution (see Appendix I) adopting the 2015 UWMP.

10.3 Public Availability

Within 30 days of filing a copy of the adopted with DWR, the City will also make the plan available for public review. The adopted UWMP will be submitted to the California State Library and will be available on the City's website: http://www.ci.milpitas.ca.gov/milpitas/departments/public-works/water-sewer-storm-system-maintenance/urban-water-management-plan/

Appendix A

CITY OF MILPITAS

UPDATE OF URBAN WATER MANAGEMENT PLAN

The City of Milpitas will be reviewing and updating its Urban Water Management Plan (UWMP), which was last updated in 2011. The UWMP provides historical, current and projected future water supply and consumption data. It also includes water conservation data and the water shortage contingency plan. A copy of the plan is available at: www.ci.milpitas.ca.gov/government/pworks/water_management.asp.

The City encourages all customers to participate in this review process. Proposed revisions to the Plan will be made available for public review and a public hearing will be held later this year. If you have any questions about our Plan or the process for updating it, please contact:

Marilyn Nickel
City of Milpitas-Engineering
455 E. Calaveras Blvd. Milpitas, CA 95035
Phone: (408) 586-3354
Fax: (408) 586-3305
mnickel@ci.milpitas.ca.gov

This was published in the Milpitas Post on February 26, 2016 and was posted on the City's website: http://www.ci.milpitas.ca.gov

CITY OF MILPITAS
NOTICE OF PUBLIC HEARING TO
ADOPT 2015 URBAN WATER MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that the Milpitas City Council will hold a public hearing on Tuesday, June 7, 2016, starting at or soon after 7:00 p.m. in the Council Chambers of the Milpitas City Hall located at 455 E. Calaveras Blvd., Milpitas; to receive public comment regarding adoption of the 2015 Urban Water Management Plan.

The 2015 UWMP is a water supply planning tool describing the service area, the existing and planned sources, existing and planned customer demands, a comparison of actual water usage against State-mandated per capita water use targets, and the Water Shortage Contingency Plan. The 2015 UWMP is available for public review and comment through the end of the public hearing described above. A copy of the 2015 UWMP is available for viewing at the City Hall front desk, and is also accessible on the City's website:

http://www.ci.milpitas.ca.gov/milpitas/departments/public-works/water-sewer-storm-system-maintenance/urban-water-management-plan/

NOTICE IS FURTHER GIVEN, pursuant to CA Government Code 65009, that any challenge of these topics in court may be limited to issues raised at the public hearing described in this notice, or in written correspondence delivered to the City Council at or prior to the hearing. Challenges shall also be in compliance with Water Code Sections 10650-10656.

INTERESTED PERSONS MAY appear and be heard at the public hearing, or may provide written comments to the City Council, via the City Clerk. The City encourages the active involvement of the diverse social, cultural and economic elements of the population within the service area. Written comments may be mailed to the City Clerk, City of Milpitas, 455 E. Calaveras Boulevard, Milpitas, CA 95035; delivered to the Information Desk on the first floor of City Hall; or emailed to mlavelle@ci.milpitas.ca.gov

Mary Lavelle

City Clerk

May 20 and 27, 2016 publication dates

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Robert Shaver
Alameda County Water District
43885 S. Grimmer Blvd
Fremont, CA 94538

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Robert Shaver,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

Marilyn Nickel
City of Milpitas
455 E. Calaveras Blvd., Milpitas, CA 95035
Phone: (408) 586-3354
Fax: (408) 586-3305
mnickel@ci.milpitas.ca.gov

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Nicole Sandkulla
Bay Area Water Supply and Conservation Agency
155 Bovet Road, Suite 650
San Mateo, CA 94402

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Nicole Sandkulla,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

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CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Syed Murtuza
Burlingame Pubilc Works
501 Primrose Road
Burlingame, CA 94010

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Syed Murtuza,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

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455 E. Calaveras Blvd., Milpitas, CA 95035
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mnickel@ci.milpitas.ca.gov

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Ron Richardson
California Water Service Company
P.O. Box 940001
San Jose, CA 95194

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Ron Richardson,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

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455 E. Calaveras Blvd., Milpitas, CA 95035
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Fax: (408) 586-3305
mnickel@ci.milpitas.ca.gov

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Randy Breault
City of Brisbane Public Works
50 Park Place
Brisbane, CA 94005

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Randy Breault,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

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mnickel@ci.milpitas.ca.gov

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Patrick Sweetland
City of Daly City
153 Lake Merced Blvd.
Daly City, CA 94015

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Patrick Sweetland,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

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mnickel@ci.milpitas.ca.gov

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Kamal Fallaha
City of East Palo Alto
1960 Tate Street
East Palo Alto, CA 94303

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Kamal Fallaha,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

Marilyn Nickel
City of Milpitas
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Phone: (408) 586-3354
Fax: (408) 586-3305
mnickel@ci.milpitas.ca.gov

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Jeff Moneda
City of Foster City
610 Foster City Blvd
Foster City, CA 94044

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Jeff Moneda,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

Marilyn Nickel
City of Milpitas
455 E. Calaveras Blvd., Milpitas, CA 95035
Phone: (408) 586-3354
Fax: (408) 586-3305
mnickel@ci.milpitas.ca.gov

CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

February 10, 2016

Richard Smelser
City of Gilroy
7351 Rosana Street
Gilroy, CA 95020

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Richard Smelser,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

We will make any proposed revisions to our Plan available for public review and will hold a public hearing later this year. If you have any questions about our Plan, or the process for updating it, please contact:

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February 10, 2016

Alex Ameri
City of Hayward Public Works
777 B Street
Hayward, CA 94541

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Alex Ameri,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Chip Taylor
City of Milbrae
621 Magnolia Avenue
Milbrae, CA 94030

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Chip Taylor,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Anthony Eulo
City of Morgan Hill Environmental Services
100 Edes Court
Morgan Hill, CA 95037

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Anthony Eulo,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Michael Fuller
City of Mountain View
500 Castro Street, 1st Floort
Mountain View, CA 94041

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Michael Fuller,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Valerie Fong
City of Palo Alto
250 Hamilton Avenue
Palo Alto, CA 94301

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Valerie Fong,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Ramana Chinnakotla
City of Redwood City
P.O. Box 391
Redwood City, CA 94063

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Ramana Chinnakotla,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Eunejune Kim
City of San Bruno
567 El Camino Real
San Bruno, CA 94066

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Eunejune Kim,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Jeff Provenzano
City of San Jose Environmental Services
200 E. Santa Clara St.
San Jose, CA 95113

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Jeff Provenzano,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Christopher de Groot
City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Christopher de Groot,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

David Dicksen
Coastside County Water District
766 Main Street
Half Moon Bay, CA 94019

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear David Dicksen,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

John Roeder
Great Oaks Water Company
20 Great Oaks Blvd, Suite 120
San Jose, CA 95119

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear John Roeder,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Pam Lowe
Menlo Park Municipal Water District
701 Laurel Street
Menlo Park, CA 94025

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Pam Lowe,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Tammy Rudock
Mid-Peninsula Water District
3 Dairy Lane
Belmont, CA 94002

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Tammy Rudock,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Cari Lemke
North Coast County Water District
P.O. Box 1039
Pacifica, CA 94044

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Cari Lemke,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Patrick D. Walter
Purissma Hills Water District
26375 Fremont Road
Los Altos Hills, CA 94022

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Patrick D. Walter,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Harlan Kelly
San Francisco Public Utilities Commission
525 Golden Gate Avenue
San Francisco, CA 94102

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Harlan Kelly,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Andrew Gere
San Jose Water Company
110 W. Taylor Street
San Jose, CA 95110

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Andrew Gere,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Joanna de Sa
San Jose/Santa Clara Regional Wastewater Facility
700 Los Esteros Road
San Jose, CA 95134

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Joanna de Sa,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Michael Rhoades
Santa Clara County
1553 Berger Drive, Bldg #1, 2nd Floor
San Jose, CA 95112

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Michael Rhoades,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Jim Fiedler
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 0

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Jim Fiedler,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Tom Zigterman
Stanford University Utilities Services
506 Oak Road
Stanford, CA 0

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Tom Zigterman,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Paul Willis
Town of Hillsborough Public Works
1600 Floribunda Ave
Hillsborough, CA 94010

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Paul Willis,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Daryl Barrow
Westborough Water District
2263 Westborough Boulevard
S. San Francisco, CA 94080

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Daryl Barrow,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

John Stufflebean
City of Sunnyvale
P.O. Box 3707
Sunnyvale, CA 0

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear John Stufflebean,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Cary Matsuoka
Milpitas Unified School District
1331 E. Calaveras Boulevard
Milpitas, CA 95035

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Cary Matsuoka,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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February 10, 2016

Liz Ainsworth
Milpitas Chamber of Commerce
828 N. Hillview Drive
Milpitas, CA 95035

SUBJECT: NOTICE OF PREPARATION OF URBAN WATER MANAGEMENT PLAN

Dear Liz Ainsworth,

The Urban Water Management Plan Act requires the City of Milpitas to update its Urban Water Management Plan. We are reviewing our current Plan, which was last updated in 2011, and will be considering revisions to it. We invite your agency's participation in this process.

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Appendix B

SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Hundred Cubic Feet
**The unit of measure must be consistent with Table 2-3*
NOTES:

SB X7-7 Table-1: Baseline Period Ranges

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	5,548,674	Hundred Cubic Feet
	2008 total volume of delivered recycled water	441,793	Hundred Cubic Feet
	2008 recycled water as a percent of total deliveries	7.96%	Percent
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1995	
	Year ending baseline period range[3]	2004	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	2007	

[1]If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period. [2]
The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

[3]The ending year must be between December 31, 2004 and December 31, 2010.

[4]The ending year must be between December 31, 2007 and December 31, 2010.

NOTES:

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☑	**1. Department of Finance** (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: Service Area Population		
Year		**Population**
10 to 15 Year Baseline Population		
Year 1	1995	57,883
Year 2	1996	58,508
Year 3	1997	59,455
Year 4	1998	60,360
Year 5	1999	61,843
Year 6	2000	62,635
Year 7	2001	62,499
Year 8	2002	62,572
Year 9	2003	63,361
Year 10	2004	62,825
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	63,361
Year 2	2004	62,825
Year 3	2005	62,177
Year 4	2006	62,133
Year 5	2007	62,684
2015 Compliance Year Population		
2015		72,606
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year *Fm SB X7-7 Table 3*		**Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**Deductions**					**Annual Gross Water Use**
			Exported Water	**Change in Dist. System Storage** (+/-)	**Indirect Recycled Water** *This column will remain blank until SB X7-7 Table 4-B is completed.*	**Water Delivered for Agricultural Use**	**Process Water** *This column will remain blank until SB X7-7 Table 4-D is completed.*	
10 to 15 Year Baseline - Gross Water Use								
Year 1	1995	5,137,417			-		-	5,137,417
Year 2	1996	5,565,315			-		-	5,565,315
Year 3	1997	6,011,256			-		-	6,011,256
Year 4	1998	5,293,412			-		-	5,293,412
Year 5	1999	5,455,794			-		-	5,455,794
Year 6	2000	5,572,253			-		-	5,572,253
Year 7	2001	5,539,451			-		-	5,539,451
Year 8	2002	5,337,363			-		-	5,337,363
Year 9	2003	5,185,661			-		-	5,185,661
Year 10	2004	5,339,749			-		-	5,339,749
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**5,443,767**
5 Year Baseline - Gross Water Use								
Year 1	2003	5,185,661			-		-	5,185,661
Year 2	2004	5,339,749			-		-	5,339,749
Year 3	2005	4,909,960			-		-	4,909,960
Year 4	2006	5,010,275			-		-	5,010,275
Year 5	2007	5,153,769			-		-	5,153,769
5 year baseline average gross water use								**5,119,883**
2015 Compliance Year - Gross Water Use								
2015		3,821,970	-		-		-	**3,821,970**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	SFPUC
This water source is:	
☐	The supplier's own water source
☑	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment* *Optional* *(+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1995	3,053,423		3,053,423
Year 2	1996	3,262,294		3,262,294
Year 3	1997	3,474,108		3,474,108
Year 4	1998	3,216,362		3,216,362
Year 5	1999	3,415,708		3,415,708
Year 6	2000	3,440,697		3,440,697
Year 7	2001	3,420,666		3,420,666
Year 8	2002	3,366,559		3,366,559
Year 9	2003	3,298,654		3,298,654
Year 10	2004	3,490,004		3,490,004
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2003	3,298,654		3,298,654
Year 2	2004	3,490,004		3,490,004
Year 3	2005	3,196,893		3,196,893
Year 4	2006	3,220,081		3,220,081
Year 5	2007	3,379,246		3,379,246
2015 Compliance Year - Water into Distribution System				
2015		2,303,238		2,303,238

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	SCVWD

This water source is:

☐	The supplier's own water source
☑	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment* *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1,995	2076981		2,076,981
Year 2	1,996	2293199		2,293,199
Year 3	1,997	2537148		2,537,148
Year 4	1,998	2077050		2,077,050
Year 5	1,999	2040086		2,040,086
Year 6	2,000	2131556		2,131,556
Year 7	2,001	2118785		2,118,785
Year 8	2,002	1970804		1,970,804
Year 9	2,003	1887007		1,887,007
Year 10	2,004	1849745		1,849,745
Year 11	-			0
Year 12	-			0
Year 13	-			0
Year 14	-			0
Year 15	-			0
5 Year Baseline - Water into Distribution System				
Year 1	2,003	1887007		1,887,007
Year 2	2,004	1849745		1,849,745
Year 3	2,005	1713067		1,713,067
Year 4	2,006	1790194		1,790,194
Year 5	2,007	1774523		1,774,523
2015 Compliance Year - Water into Distribution System				
2015		1,518,732		1,518,732

NOTES: ** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	McCarthy Well Water

This water source is:

- ☐ The supplier's own water source
- ☑ A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment* *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1,995	7013		7,013
Year 2	1,996	9821.8		9,822
Year 3	1,997	0		0
Year 4	1,998	0		0
Year 5	1,999	0		0
Year 6	2,000	0		0
Year 7	2,001	0		0
Year 8	2,002	0		0
Year 9	2,003	0		0
Year 10	2,004	0		0
Year 11	-			0
Year 12	-			0
Year 13	-			0
Year 14	-			0
Year 15	-			0
5 Year Baseline - Water into Distribution System				
Year 1	2,003	0		0
Year 2	2,004	0		0
Year 3	2,005	0		0
Year 4	2,006	0		0
Year 5	2,007	0		0
2015 Compliance Year - Water into Distribution System				
2015		0		0

NOTES: ** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1995	57,883	5,137,417	182
Year 2	1996	58,508	5,565,315	195
Year 3	1997	59,455	6,011,256	207
Year 4	1998	60,360	5,293,412	180
Year 5	1999	61,843	5,455,794	181
Year 6	2000	62,635	5,572,253	182
Year 7	2001	62,499	5,539,451	182
Year 8	2002	62,572	5,337,363	175
Year 9	2003	63,361	5,185,661	168
Year 10	2004	62,825	5,339,749	174
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**183**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2003	63,361	5,185,661	168
Year 2	2004	62,825	5,339,749	174
Year 3	2005	62,177	4,909,960	162
Year 4	2006	62,133	5,010,275	165
Year 5	2007	62,684	5,153,769	169
5 Year Average Baseline GPCD				**168**
2015 Compliance Year GPCD				
2015		72,606	3,821,970	**108**

NOTES:

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	183
5 Year Baseline GPCD	168
2015 Compliance Year GPCD	108
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		Supporting Documentation
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	**2020 Target GPCD**
183	**146**
NOTES:	

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target			
5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]	**Confirmed 2020 Target**
168	159	146	**146**

[1]Maximum 2020 Target is 95% of the 5 Year Baseline GPCD
[2]2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.

NOTES:

SB X7-7 Table 8: 2015 Interim Target GPCD		
Confirmed 2020 Target *Fm SB X7-7 Table 7-F*	10-15 year Baseline GPCD *Fm SB X7-7 Table 5*	**2015 Interim Target GPCD**
146	183	**164**

NOTES:

SB X7-7 Table 9: 2015 Compliance								
Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments *(in GPCD)* Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD	2015 GPCD *(Adjusted if applicable)*	**Did Supplier Achieve Targeted Reduction for 2015?**
		Extraordinary Events	Weather Normalization	Economic Adjustment				
108	164	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	108	108	**YES**

NOTES:

Appendix C

San Francisco
Water Power Sewer
Operator of the Hetch Hetchy Regional Water System

525 Golden Gate Avenue, 10th Floor
San Francisco, CA 94102
T 415.554.3271
F 415.934.5770
TTY 415.554.3488

January 5, 2016

Andree Johnson
Water Resources Specialist
Bay Area Water Supply and Conservation Agency
155 Bovet Road, Suite 650
San Mateo, CA 94402

Dear Ms. Johnson,

Attached please find the information you requested on the Regional Water System's supply reliability for use in the Wholesale Customer's 2015 Urban Water Management Plan (UWMP) updates. The SFPUC has assessed the water supply reliability under the following planning scenarios:

- Projected single dry year supply for base year 2015[1],
- Projected multiple dry year supply beginning with base year 2015, and
- Projected supply reliability for base year 2015 through 2040.

Table 1 summarizes deliveries to the Wholesale Customers for projected single dry year supply for base year 2015 and projected multiple dry year supply beginning base year 2015.

With regards to future demands, the SFPUC proposes to expand their water supply portfolio by increasing the types of water supply resources. Table 2 summarizes the water supply resources assumed to be available by 2040, as well as other assumptions affecting supply. These assumptions differ from those used in the reliability analysis for the previous 2010 UWMP update, and lead to slightly different reliability projections explained further below.

Concerning allocation of supply during dry years, the Water Shortage Allocation Plan (WSAP) was utilized to allocate shortages between the SFPUC and the Wholesale Customers collectively. The WSAP implements a method for allocating water between the SFPUC retail customers and wholesale customers collectively which has been adopted by the Wholesale Customers

[1] Fiscal Year 2015 is used as the base year to run the water supply reliability analysis in the Hetch Hetchy Local Simulation Model (HHLSM). This base year reflects a wholesale Supply Assurance of 184 million gallons per day, as well as Regional Water System reservoir and pipeline capacities and instream flow requirements as they exist in 2015 (pre-Water System Improvement Program [WSIP] completion).

per the July 2009 Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo County, and Santa Clara County. The wholesale customers have adopted the Tier Two Plan, the second component of the WSAP, which allocates the collective wholesale customer share among each of the 26 wholesale customers.

Finally, the SFPUC estimated the frequency and severity of anticipated shortages for the period 2015 (base year) through 2040. For this analysis, we assumed that the historical hydrologic period is indicative of future events and evaluated the supply reliability assuming a repeat of the actual historic hydrologic period 1921 through 2011. The results of this analysis are summarized in Table 3.

Compared to the reliability projections that were provided previously for the 2010 UWMP update, Table 1 indicates slightly higher shortages and lower Wholesale allocations for dry years 2 and 3. Also, Table 3 shows slightly higher estimates of required rationing in multi-year droughts as compared to those provided previously. These differences are due to the inclusion of a temporary constraint on Crystal Springs Reservoir storage and an in-stream flow requirement below Crystal Springs Reservoir, which are shown in Table 2, but were not included in the previous reliability analysis.

It is our understanding that you will pass this information on to the Wholesale Customers. If you have any questions or need additional information, please do not hesitate to contact me at (415) 554-0792.

Sincerely,

Paula Kehoe

Paula Kehoe
Director of Water Resources

Table 1: Projected Deliveries for Three Multiple Dry Years

	Base Year 2015 (Non-Dry)	One Critical Dry Year	Deliveries During Multiple Dry Years		
			Year 1	Year 2	Year 3
System-Wide Shortage	0%	10%	10%	22%	22%
Wholesale Allocation (MGD)	184.0	152.6	152.6	129.2	129.2

MGD = million gallons per day

Table 2: Water Supply Modeling Assumptions for Fiscal Years 2015 through 2040

	2015	2020	2025	2030	2035	2040
Water Supply Resource						
Westside Basin Groundwater (AF/yr)		8,100	8,100	8,100	8,100	8,100
Districts Transfer (AF/yr)		2,240	2,240	2,240	2,240	2,240
Crystal Springs Reservoir Capacity (20.3 BG) [1]			x	x	x	x
Calaveras Reservoir at Full Capacity		x	x	x	x	x
Alameda Creek Recapture (9.3 MGD)		x	x	x	x	x
Reservoir Operation Affecting Supply						
Crystal Springs Reservoir Release for In-Stream Flow to San Mateo Creek (3.5 MGD) [2]	x	x	x	x	x	x
Calaveras Reservoir Release and Alameda Creek Diversion Dam Bypass for In-Stream Flow to Alameda Creek (9.3 MGD)		x	x	x	x	x

AF/yr = acre-feet per year, BG = billion gallons, MGD = million gallons per day, x = in operation

Notes:

1. Schedule for restoration of Crystal Springs Reservoir storage is tied to permitting requirements for endangered plants.
2. Release from Crystal Springs Reservoir to meet minimum in-stream flow requirement in San Mateo Creek began in January 2015.

Table 3: Projected System Supply Reliability Based on Hydrologic Period

	Wholesale Demand (MGD)					
	184.0	184.0	184.0	184.0	184.0	184.0
	Projected Wholesale Allocation (MGD)					
Fiscal Year	2015	2020	2025	2030	2035	2040
1920-21	184.0	184.0	184.0	184.0	184.0	184.0
1921-22	184.0	184.0	184.0	184.0	184.0	184.0
1922-23	184.0	184.0	184.0	184.0	184.0	184.0
1923-24	184.0	184.0	184.0	184.0	184.0	184.0
1924-25	152.6	184.0	184.0	184.0	184.0	184.0
1925-26	184.0	184.0	184.0	184.0	184.0	184.0
1926-27	184.0	184.0	184.0	184.0	184.0	184.0
1927-28	184.0	184.0	184.0	184.0	184.0	184.0
1928-29	184.0	184.0	184.0	184.0	184.0	184.0
1929-30	184.0	184.0	184.0	184.0	184.0	184.0
1930-31	184.0	184.0	184.0	184.0	184.0	184.0
1931-32	129.2	152.6	152.6	152.6	152.6	152.6
1932-33	184.0	184.0	184.0	184.0	184.0	184.0
1933-34	184.0	184.0	184.0	184.0	184.0	184.0
1934-35	152.9	184.0	184.0	184.0	184.0	184.0
1935-36	184.0	184.0	184.0	184.0	184.0	184.0
1936-37	184.0	184.0	184.0	184.0	184.0	184.0
1937-38	184.0	184.0	184.0	184.0	184.0	184.0
1938-39	184.0	184.0	184.0	184.0	184.0	184.0
1939-40	184.0	184.0	184.0	184.0	184.0	184.0
1940-41	184.0	184.0	184.0	184.0	184.0	184.0
1941-42	184.0	184.0	184.0	184.0	184.0	184.0
1942-43	184.0	184.0	184.0	184.0	184.0	184.0
1943-44	184.0	184.0	184.0	184.0	184.0	184.0
1944-45	184.0	184.0	184.0	184.0	184.0	184.0
1945-46	184.0	184.0	184.0	184.0	184.0	184.0
1946-47	184.0	184.0	184.0	184.0	184.0	184.0
1947-48	184.0	184.0	184.0	184.0	184.0	184.0
1948-49	184.0	184.0	184.0	184.0	184.0	184.0
1949-50	184.0	184.0	184.0	184.0	184.0	184.0
1950-51	184.0	184.0	184.0	184.0	184.0	184.0
1951-52	184.0	184.0	184.0	184.0	184.0	184.0
1952-53	184.0	184.0	184.0	184.0	184.0	184.0
1953-54	184.0	184.0	184.0	184.0	184.0	184.0
1954-55	184.0	184.0	184.0	184.0	184.0	184.0
1955-56	184.0	184.0	184.0	184.0	184.0	184.0
1956-57	184.0	184.0	184.0	184.0	184.0	184.0
1957-58	184.0	184.0	184.0	184.0	184.0	184.0
1958-59	184.0	184.0	184.0	184.0	184.0	184.0
1959-60	184.0	184.0	184.0	184.0	184.0	184.0
1960-61	152.6	184.0	184.0	184.0	184.0	184.0

	Wholesale Demand (MGD)					
	184.0	184.0	184.0	184.0	184.0	184.0
	Projected Wholesale Allocation (MGD)					
Fiscal Year	2015	2020	2025	2030	2035	2040
1961-62	129.2	152.6	152.6	152.6	152.6	152.6
1962-63	184.0	184.0	184.0	184.0	184.0	184.0
1963-64	184.0	184.0	184.0	184.0	184.0	184.0
1964-65	184.0	184.0	184.0	184.0	184.0	184.0
1965-66	184.0	184.0	184.0	184.0	184.0	184.0
1966-67	184.0	184.0	184.0	184.0	184.0	184.0
1967-68	184.0	184.0	184.0	184.0	184.0	184.0
1968-69	184.0	184.0	184.0	184.0	184.0	184.0
1969-70	184.0	184.0	184.0	184.0	184.0	184.0
1970-71	184.0	184.0	184.0	184.0	184.0	184.0
1971-72	184.0	184.0	184.0	184.0	184.0	184.0
1972-73	184.0	184.0	184.0	184.0	184.0	184.0
1973-74	184.0	184.0	184.0	184.0	184.0	184.0
1974-75	184.0	184.0	184.0	184.0	184.0	184.0
1975-76	184.0	184.0	184.0	184.0	184.0	184.0
1976-77	152.6	184.0	184.0	184.0	184.0	184.0
1977-78	129.2	152.6	152.6	152.6	152.6	152.6
1978-79	184.0	184.0	184.0	184.0	184.0	184.0
1979-80	184.0	184.0	184.0	184.0	184.0	184.0
1980-81	184.0	184.0	184.0	184.0	184.0	184.0
1981-82	184.0	184.0	184.0	184.0	184.0	184.0
1982-83	184.0	184.0	184.0	184.0	184.0	184.0
1983-84	184.0	184.0	184.0	184.0	184.0	184.0
1984-85	184.0	184.0	184.0	184.0	184.0	184.0
1985-86	184.0	184.0	184.0	184.0	184.0	184.0
1986-87	184.0	184.0	184.0	184.0	184.0	184.0
1987-88	152.6	184.0	184.0	184.0	184.0	184.0
1988-89	129.2	152.6	152.6	152.6	152.6	152.6
1989-90	129.2	152.6	152.6	152.6	152.6	152.6
1990-91	129.2	132.5	132.5	132.5	132.5	132.5
1991-92	129.2	132.5	132.5	132.5	132.5	132.5
1992-93	129.2	132.5	132.5	132.5	132.5	132.5
1993-94	184.0	184.0	184.0	184.0	184.0	184.0
1994-95	184.0	184.0	184.0	184.0	184.0	184.0
1995-96	184.0	184.0	184.0	184.0	184.0	184.0
1996-97	184.0	184.0	184.0	184.0	184.0	184.0
1997-98	184.0	184.0	184.0	184.0	184.0	184.0
1998-99	184.0	184.0	184.0	184.0	184.0	184.0
1999-00	184.0	184.0	184.0	184.0	184.0	184.0
2000-01	184.0	184.0	184.0	184.0	184.0	184.0
2001-02	184.0	184.0	184.0	184.0	184.0	184.0
2002-03	184.0	184.0	184.0	184.0	184.0	184.0
2003-04	184.0	184.0	184.0	184.0	184.0	184.0

	Wholesale Demand (MGD)					
	184.0	184.0	184.0	184.0	184.0	184.0
	Projected Wholesale Allocation (MGD)					
Fiscal Year	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
2004-05	184.0	184.0	184.0	184.0	184.0	184.0
2005-06	184.0	184.0	184.0	184.0	184.0	184.0
2006-07	184.0	184.0	184.0	184.0	184.0	184.0
2007-08	184.0	184.0	184.0	184.0	184.0	184.0
2008-09	184.0	184.0	184.0	184.0	184.0	184.0
2009-10	184.0	184.0	184.0	184.0	184.0	184.0
2010-11	184.0	184.0	184.0	184.0	184.0	184.0

MGD = million gallons per day

Appendix D

CITY OF MILPITAS

NOTICE OF PUBLIC HEARING REGARDING WATER CONSERVATION PROGRAM

NOTICE IS HEREBY GIVEN that the Milpitas City Council will hold a public hearing on Tuesday, June 16, 2015, starting at or soon after 7:00 p.m. in the Council Chambers of the Milpitas City Hall located at 455 E. Calaveras Blvd., Milpitas, to consider a Water Conservation Program. The Governor has declared a drought condition exists and the State adopted several water conservation measures. The Water Conservation Program includes additional prohibitions of potable water use, water rationing, and penalties.

NOTICE IS FURTHER GIVEN, pursuant to CA Government Code §65009, that any challenge of these topics in court may be limited to issues raised at the public hearing described in this notice, or in written correspondence delivered to the City Council at or prior to the hearing.

INTERESTED PERSONS MAY appear and be heard at the public hearing, or may provide written comments to the City Council, via the City Clerk. Written comments may be mailed or delivered to the City Clerk, City of Milpitas, 455 E. Calaveras Blvd, Milpitas, CA 95035 or e-mailed to: mlavelle@ci.milpitas.ca.gov .

Mary Lavelle
City Clerk
date

Appendix E

Rationing Program Options

Water purveyors have tried various methods to get customers to cut usage during drought. All methods have pros and cons and have varying customer acceptance and effectiveness. When drought conditions develop that require usage reduction, the City will consider the circumstances and public input, and then expects to implement one or more of the following methods:

Inverted Block Rate Structure

This system does not assign allotments for each customer. Instead, the water rate structure includes several tiers with increasing costs as usage increases. The lowest tier would cost the least. As customers consume larger quantities of water, they would pay more for each unit of water used in succeeding tiers.

Pros	Cons
The customer can control costs by controlling water usage.	Some customers will not conserve as they are willing to pay the higher prices.
Allotments are not required. This also eliminates receiving, reviewing, and revising customer allotments.	May penalize high water users such as industries and institutions.
Can be implemented quickly.	Difficult to accurately predict revenues initially.
	May penalize large families who require higher water needs.
	Difficult to establish appropriate tiers for varying commercial such as bookstore versus restaurant.

Per Household

This system assigns identical allotments to each customer in a specific user group. For example, all residential customers would receive the same allotment, regardless of household size and outside water needs.

Pros	Cons
A census would not be required.	Variations in household size are not taken into account.
Can be implemented quickly.	Outside water needs are not taken into account.
	Commercial, industrial, institutional/governmental and irrigation customers have unique needs.

Per Household and Irrigation

This system assigns identical allotments to each customer in a specific user group and includes an additional amount for customers with outside water use.

Pros	Cons
A census would not be required.	Variations in household size are not taken into account.
Can be implemented quickly.	A fixed amount is given for outside needs. However, variations in these needs are not taken into account.
	Commercial, industrial, institutional/governmental and irrigation customers are not taken into account.

Per Capita

This system allows for a set volume of water for each person in the residential sector. Allotments can be increased for additional temporary or permanent visitors.

Pros	Cons
Customers may perceive this to be a fair system.	Allotment does not take into account variations in outside water needs.
Allotments are based on needs, not past water usage habits.	Does not provide allotments for commercial, industrial, institutional/governmental, and irrigation customers.
Some allotments will increase (compared to Percent of Use method).	A census will be required to determine household size. Customer honesty cannot be verified. This would require significant lead time to implement.
Allotments are based on current household sizes.	Some allotments will decrease (compared to Percent of Use method).
Results in a minimum number of residential exceptions.	Allotments are not automatically reduced when household size decreases.
	Does not consider individual needs.
	Single family homes with excessive outside consumption would be penalized.

Water Use Allocation (Water Budget)

This method allows customers to develop their individual water budget based on household size, are of outdoor water use (landscaping and pools/spas), and other factors. Customers may compute an online survey, or accept default values. This system provides a specific allotment for each person in the residential sector and includes an additional amount for

outside water use. As in the per capita method, allotments can be increased for additional temporary or permanent visitors.

Pros	Cons
Customers may perceive this to be a fair system.	Variations in lot sizes are not taken into account.
Allotment includes some landscaping water.	Does not provide allotments for commercial, industrial, institutional/governmental, and irrigation customers.
Allotments are based on needs, not past water usage habits.	A census will be required to determine household size. Customer honesty cannot be verified. This would require significant lead time to implement.

Percent of Use with Exceptions Allowed

The allotment is based on a specified percentage of a previous year's usage. Allotments can be increased for documented changes such as absence during the base year, increased household size (both temporary and permanent), new landscaping, new appliances, pools, and growth in the non-residential sectors.

Pros	Cons
The majority of the allotments can be computer generated from the existing water usage database, allowing for a quick implementation.	Neighbors with identical lot size and family size can have greatly differing allotments, resulting in perceived unfairness.
Customers that require or use larger amounts of water receive larger allotments than those who use less water.	Customer who wasted water in the base year will receive larger allotments than those who did not waste water.
A population census is not required.	Does not provide allotments for customers who established accounts after the base year.
This method was implemented during the City's mandatory rationing of 1988-89 and 1990-93. City staff and water customers are familiar with the process.	Does not always provide adequate allotments for those customers who moved during the base year.
A "floor" (minimum allotment) can be established to serve as a lifeline.	This method was used during the 1988-89 and 1990-93 mandatory rationing periods. The exception process for requesting allotment increases was very labor intensive.
Can consider differences in lot sizes, number in households, and landscape sizes.	Allotment is not automatically reduced when household size is reduced.

Appendix F

CERTIFICATION OF CITY CLERK

ORDINANCE NO. 120.47

I, Pam Caronongan, Deputy City Clerk of the City of Milpitas, do hereby certify that the attached Ordinance is a true and correct copy of Ordinance No. 120.47 of the City of Milpitas, that this Ordinance was duly enacted and adopted by the City Council of the City of Milpitas at a meeting of the City Council held on the 15th day of December 2015, and that the Ordinance was published and/or posted in the manner required by law.

WITNESS my hand and the Official Seal of the City of Milpitas, California, this 18th day of December 2015.

Pam Caronongan
Milpitas Deputy City Clerk

REGULAR

NUMBER: 120.47

TITLE: **AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MILPITAS AMENDING CHAPTER 1 OF TITLE VIII OF THE MILPITAS MUNICIPAL CODE RELATING TO WATER SERVICE CHARGES**

HISTORY: This Ordinance was introduced (first reading) by the City Council at its meeting of October 6, 2015, upon motion by Councilmember Giordano, and was adopted (second reading) by the City Council at its meeting of December 15, 2015, upon motion by Councilmember Giordano. Said Ordinance was duly passed and ordered published in accordance with law by the following vote:

AYES: (4) Mayor Esteves, Vice Mayor Montano, Councilmembers Giordano and Grilli

NOES: (1) Councilmember Barbadillo

ABSENT: (0)

ABSTAIN: (0)

ATTEST:

Mary Lavelle, City Clerk

APPROVED:

Jose S. Esteves, Mayor

APPROVED AS TO FORM:

Christopher J. Diaz, City Attorney

RECITALS AND FINDINGS:

WHEREAS, the provision of potable and recycled services by the City of Milpitas ("City") require the City to incur capital, operating, maintenance, replacement, and other costs related to the provision of such services; and

WHEREAS, the City engaged Bartle Wells Associates to prepare a cost of service analysis and water rate study (the "Rate Study"); and

WHEREAS, as a result of the Rate Study, the City Council has determined that increases in the rates for its water service charges are in the best interests of the City and in keeping with sound business and financial management of the water enterprises; and

WHEREAS, the City Council hereby finds and determines the following with regard to the proposed rate increases to the water service charges:

1. The rate structure for the water service charges has two components: (a) a Water Meter Charge, which is a fixed bimonthly charge determined on the basis of the size of the water meter (in inches) serving a customer's property and calculated to recover a portion of the City's fixed costs in providing water service; and (b) a Volumetric Charge, which is a uniform rate imposed on the basis of the amount of water delivered to a customer in hundreds of cubic feet ("HCF") and calculated to recover a portion of the City's fixed and variable costs of providing water service; and

2. The rate structure also has a Fire Meter Charge which is: (a) imposed on certain properties requiring a large private fire suppression system, and upon the request of the customer or property owner for the delivery of water to the property for the purpose of fire service protection; and (b) established on the basis of the size of the fire service line (in inches) and calculated to recover the cost of providing water to such properties for private fire service protection; and

3. Beginning April 1, 2016, the rate structure will also include a Capital Surcharge, which will be imposed on the basis of the amount of water delivered to a customer in HCF and calculated to recover capital costs of the water system; and

WHEREAS, the City hereby finds and determines that in accordance with the provisions of California Constitution article XIII D, section 6 ("Article XIII D"):

1. The City identified the parcels upon which the water service charges are proposed to be imposed, and calculated the amount of the water service charges proposed to be imposed on each parcel; and

2. The City caused a written notice to be mailed to the record owners of property upon which the proposed water service charges will be imposed and the customers of each parcel upon which the proposed increases to the water service charges are proposed for imposition, which explained: (a) the amount of the water service charges; (b) the basis on which they were calculated; (c) the reason for the increases; and (d) the date, time, and location of the public hearing on the proposed increases; and

3. On December 15, 2015, (more than 45 days after mailing the notice), the City conducted a public hearing and considered all written protests against the proposed increases to the rates for the water service charges; and

4. At the conclusion of the public hearing, written protests against the proposed increases to the rates for the water service charges were not presented by a majority of property owners of record and customers subject to the proposed water service charges; and

WHEREAS, the adoption of the proposed increases to water service charges are statutorily exempt from the requirements of the California Environmental Quality Act under California Resources Code Section 21080(b)(8).

NOW THEREFORE, the City Council of the City of Milpitas does ordain as follows:

SECTION 1. RECORD AND BASIS FOR ACTION

The City Council has duly considered the full record before it, which may include but is not limited to such things as the Rate Study, City staff report, testimony by staff and the public, and other materials and evidence submitted or provided to the City Council. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

SECTION 2. AMENDMENT OF MILPITAS MUNICIPAL CODE VIII-1-6.13

Section VIII-1-6.13 of the Milpitas Municipal Code is hereby repealed in its entirety and replaced with the text below to read as follows:

VIII-1-6.13 Quantity Charges

The quantity charges include a volumetric charge and a capital surcharge. The uniform rates for the quantity charges are billed bimonthly and imposed per hundred cubic feet ("HCF") for metered water service. The rates and effective dates for the quantity charges shall be those set forth below.

RATES AND EFFECTIVE DATES FOR QUANTITY CHARGES ($/HCF)			
Customer Class	**Volumetric Charge 1/15/2016**	**Volumetric Charge 4/1/2016**	**Capital Surcharge 4/1/2016**
Residential:	$4.75	$5.13	$1.30
Commercial / Industrial / Institutional / Construction Meter	$4.75	$5.13	$1.30
Irrigation (potable)	$4.75	$5.13	$1.30
City Accounts (potable)	$4.75	$5.13	$1.30
Ed Levin Park	$3.75	$3.79*	NA
Recycled - Irrigation	$2.42	$2.78	NA
Recycled - Industrial / Dual Plumbed/ Construction Water	$2.42	$2.78	NA
City Accounts (recycled)	$2.42	$2.78	NA

The County of Santa Clara rate is established by contract to be equivalent to the San Francisco Public Utilities Commission ("SFPUC") wholesale rate. The FY 2016-17 SFPUC rate is estimated to be $3.79/HCF and staff will revise to actual rate once SFPUC adopts the FY 2016-17 wholesale rate.

FY = Fiscal Year
1 HCF = One Hundred Cubic Feet = 748 Gallons

SECTION 3. AMENDMENT OF MILPITAS MUNICIPAL CODE VIII-1-6.14

Section VIII-1-6.14 of the Milpitas Municipal Code is hereby repealed in its entirety and replaced with the text below to read as follows:

VIII-1-6.14 Bimonthly Water Meter Charges

(a) Water Meter Charges: The rates and the effective dates for the bimonthly water meter charges, determined on the basis of the size of the water meter, shall be as follows:

RATES AND EFFECTIVE DATES FOR WATER METER CHARGES ($/METER SIZE)		
Water Meter Size	**Charge 1/15/2016**	**Charge 4/1/2016**
5/8"	$18.00	$19.44
3/4"	$27.00	$29.16
1"	$45.00	$48.60
1-1/2"	$90.00	$97.20
2"	$144.00	$155.52
3"	$270.00	$291.60
4"	$450.00	$486.00
6" and above	$900.00	$972.00

(b) For Temporary Construction Meter Customers, the bimonthly water meter charges shall be equal to the bimonthly water meter charges for 3" water meters set forth in Section 6.14(a).

No adjustments shall be granted to any water account holder due to variation in the days of service for any bimonthly billing period. Acceptable days of service range from 50 to 69 days per bimonthly billing period.

SECTION 4. AMENDMENT OF MILPITAS MUNICIPAL CODE VIII-1-6.15

Section VIII-1-6.15 of the Milpitas Municipal Code is hereby repealed in its entirety and replaced with the text below to read as follows:

VIII-1-6.15 Fire Service Charges

The rates and effective dates for the bimonthly fire service charges, determined on the basis of the size of the fire service, shall be as follows:

RATES AND EFFECTIVE DATES FOR FIRE SERVICE CHARGE ($/SIZE OF FIRE SERVICE LINE)		
Fire Service Line Size	**Charge 1/15/2016**	**Charge 4/1/2016**
2"	$28.80	$31.10
3"	$54.00	$58.32
4"	$90.00	$97.20
6"and above	$180.00	$194.40

Water flowing through fire suppression systems shall be used solely for the purpose of fire protection and testing of such fire protection systems. In the event that water service provided through fire suppression systems is used for purposes other than for fire protection or the testing of such fire

protection systems, the quantity charges equal to the quantity charge rates (per HCF) for Commercial/ Industrial/ Institutional customers shall be imposed .

SECTION 5. AMENDMENT OF MILPITAS MUNICIPAL CODE VIII-1-6.16

Section VIII-1-6.16 of the Milpitas Municipal Code is hereby repealed in its entirety and replaced with the text below to read as follows:

VIII-1-6.16 Billing and Effective Dates of Water Rates and Charges

Billing. After the Ordinance adopting the charges set forth in this Section goes into effect, customers shall be subject to the water service charges at the rates and on the effective dates set forth in 6.13 (Quantity Charges), 6.14 (Bimonthly Water Meter Charges), and 6.15 (Fire Service Charges), for services provided on or after January 15, 2016, and April 1, 2016, respectively. In the absence of amendment of the rates set forth herein or adoption of a new rate ordinance, the rates in effect on April 1, 2016, and set forth herein shall remain in effect until amended or repealed.

SECTION 6. SEVERABILITY

If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance, or the application thereof to any person or place, is for any reason held to be invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remainder of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance, and each and every section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional, provided, however, that if any decision of a court of competent jurisdiction invalidates the increase of the water service charges set forth in this Ordinance, then the water service charges in effect on the date of adoption shall continue in existence.

SECTION 7. ORDINANCE PREVAILS

To the extent that any other provision of local law relating to the establishment of water charges is inconsistent with this Ordinance, the provisions of this Ordinance shall prevail. This Ordinance shall supersede all other previous City Council resolutions and ordinances that may conflict with, or be contrary to, this Ordinance.

SECTION 8. EFFECTIVE DATE AND POSTING

This Ordinance shall take effect thirty (30) days from and after the date of its passage. The City Clerk of the City of Milpitas shall cause this Ordinance or a summary thereof to be published in accordance with Section 36933 of the Government Code of the State of California.

Appendix G

Sample Water Shortage Emergency Restrictions Ordinance

URGENCY

NUMBER: _____

NOTICE IS HEREBY GIVEN that on _____, 20_____, the Milpitas City Council introduced Ordinance No. _____ upon motion by Councilmember _____ and by the following vote

AYES:
NOES:
ABSENT:
ABSTAIN:

immediately passed, adopted, and ordered published in accordance with law entitled:

AN ORDINANCE OF THE CITY OF MILPITAS ADDING SECTIONS 5, 6, AND 7, CHAPTER 6, TITLE VIII OF THE MILPITAS MUNICIPAL CODE, RELATING TO SUPPLEMENTAL WATER USE RESTRICTIONS, EFFECTIVE DATE, AND PENALTIES

ATTEST:

_____
City Clerk

APPROVED:

_____
Mayor

APPROVED AS TO FORM:

_____
City Attorney

ORDAINING CLAUSE:
THE CITY COUNCIL OF THE CITY OF MILPITAS DOES ORDAIN AS FOLLOWS:

Addition of Section VIII-6-5. Title VIII, Chapter 6, Section 5 of the Milpitas Municipal Code was adopted per CA Government Code Sections 36934 and 36937 and Water Code Sections 350, et seq. and 375, et seq.

RECITALS:

Whereas, Government Code Sections 36934 and 36937 authorize a city to adopt an urgency ordinance for the immediate preservation of the public peace, health or safety; and

Whereas, water is a precious resource shared by all and is needed to sustain life; and

Whereas, California Water Code Sections 10610 through 10657 require urban water retailers, such as the City of Milpitas, to adopt an Urban Water Management Plan and Water Shortage Contingency Plan every five (5) years; and

Whereas, the Milpitas City Council adopted the 2015 Urban Water Management Plan and Water Shortage Contingency Plan on June 7, 2016; and

Whereas, the (City's water wholesaler) on _____, declared a Water Shortage Emergency; and

Whereas, a Water Shortage Emergency condition prevails within the area served by city of Milpitas; and

Whereas, the (City's water wholesaler), at the direction of the (Commission or Board), requires that all resale customers, including the City of Milpitas, institute a water conservation program designed to reduce the amount of water purchased. The (City's wholesaler) has determined monthly allotments of water for the city; and

Whereas, in light of the continued water supply shortage in the State of California as set forth above, the City Council must take such action to be effective immediately and to do so requires an urgency ordinance to preserve the public peace, health and safety of its residents; and

Whereas, in accordance with Water Code Sections 350 et seq., 375 et. seq, the laws and regulations cited above, the full text of this Ordinance was posted in the City Clerk's Office at least five (5) days prior to the public hearing and will be published in a newspaper of general circulation within fifteen (15) days of adoption of this Ordinance.

VIII-6-5.00 Supplemental Water Use Restrictions (Select this Section 5 for Stage 1 Water Conservation Program)

The following additional uses of potable water are prohibited:

Construction purposes such as dust control, compaction and sweeping
Hydrant flushing, except for public health and safety

VIII-6-5.00 Supplemental Water Use Restrictions (Select this Section 5 for Stage II Water Conservation Program)

The following additional uses of potable water are prohibited:

Construction purposes such as dust control, compaction, and sweeping
Hydrant flushing, except for public health and safety
Potable irrigation of golf courses except greens and tees
Potable irrigation of any plants, lawn, grass, landscaping, or turf areas for no more than two (2) days during any seven (7) day period

VIII-6-5.00 Supplemental Water Use Restrictions (Select this Section 5 for Stage III Water Conservation Program)

The following additional uses of potable water are prohibited:

Construction purposes such as dust control, compaction, and sweeping
Hydrant flushing, except for health and safety
Potable irrigation of golf courses except greens and tees
Potable irrigation of any plants, lawn, grass, landscaping, or turf areas for no more than two (2) days during any seven (7) day period
New swimming pool, pond, or decorative water feature construction
Potable water use for cleaning, filling, or maintaining levels in decorative fountains
Washing vehicles outside of a commercial washing facility
Irrigation of median landscape strips
Lodging establishment must offer opt out of linen service
Pools and spas shall be covered when not in use to prevent evaporation
Potable water use for installation of new landscape unless served by recycled water

Addition of Section VIII-6-6. Title VIII, Chapter 6, Section 6 of the Milpitas Municipal Code is hereby added to read as follows:

VIII-6-6.00 Effective Date of Supplemental Water Restrictions

In accordance with California Government Code Sections 36934 and 36937, this Ordinance is effective immediately upon adoption by the City Council as an Urgency Ordinance. The City

Clerk of the City of Milpitas shall cause this Ordinance or a summary thereof to be published in accordance with Section 36933 of the Government Code of the State of California.

VIII-6-7.00 Penalties

Any persons or persons, company, corporation or association, who shall violate any of the provisions of this Chapter or fail to comply therewith, or who shall violate or fail to comply with any order made thereunder, shall severally for each and every violation and non-compliance respectively, be guilty of an infraction, punishable in accordance with the provisions of I-4-4.09-1 of the Milpitas Municipal Code. The imposition of one fine for any violation shall not excuse the violation or permit it to continue; and all such persons shall be required to correct or remedy such violations or defects within a reasonable time; and when not otherwise specified, each day that prohibited conditions are maintained shall constitute a separate offense.

Appendix H

CERTIFICATION OF CITY CLERK

ORDINANCE NO. 240.4

I, Mary Lavelle, City Clerk of the City of Milpitas, do hereby certify that the attached Ordinance is a true and correct copy of Ordinance No. 240.4 of the City of Milpitas, that this Ordinance was duly enacted and adopted by the City Council of the City of Milpitas at a meeting of the City Council held on the 20th day of October 2015, and that the Ordinance was published and/or posted in the manner required by law.

WITNESS my hand and the Official Seal of the City of Milpitas, California, this 23rd day of October, 2015.

Mary Lavelle

Mary Lavelle
Milpitas City Clerk

REGULAR

NUMBER: **240.4**

TITLE: **AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MILPITAS AMENDING CHAPTER 6 OF TITLE VIII OF THE MILPITAS MUNICIPAL CODE RELATING TO SUPPLEMENTAL WATER USE**

HISTORY: This Ordinance was introduced (first reading) by the City Council at its meeting of October 6, 2015, upon motion by Councilmember Giordano, and was adopted (second reading) by the City Council at its meeting of October 20, 2015, upon motion by Councilmember Grilli. The Ordinance was duly passed and ordered published in accordance with law by the following vote:

AYES: (5) Mayor Esteves, Vice Mayor Montano, Councilmembers Barbadillo, Giordano, and Grilli

NOES: (0)

ABSENT: (0)

ABSTAIN: (0)

ATTEST:

Mary Lavelle, City Clerk

APPROVED:

Jose S. Esteves, Mayor

APPROVED AS TO FORM:

Christopher J. Diaz, City Attorney

RECITALS AND FINDINGS:

WHEREAS, on April 1, 2015, the Governor of California issued an Executive Order requiring a Statewide mandatory reduction of potable water usage by twenty-five percent (25%) with enforcement regulations due to severe drought conditions; and

WHEREAS, on May 5, 2015, the State Water Resources Control Board adopted additional emergency regulations for Statewide urban water conservation requiring water retailers to implement additional conservation measures as part of its Water Shortage Contingency Plan; and

WHEREAS, on June 16, 2015, the City Council of the City of Milpitas declared the continuation of a water shortage for the year 2015 (Stage 2 of the Milpitas Water Shortage Contingency Plan) and added additional conservation measures as required by State law; and required the community to implement water conservation measures with a goal of reducing consumption by thirty percent (30%); and

WHEREAS, on June 16, 2015, the City Council of the City of Milpitas adopted Urgency Ordinance No. 240.3, amending Chapter 6 of Title VIII of the Milpitas Municipal Code to include penalties for customers who fail to limit their water use;

WHEREAS, the City never implemented the penalty water rates repealed by this Ordinance; and

WHEREAS, in the case of ***Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano*** the Court ruled that penalty rates for excessive water usage above-the-cost-of-service for the water may violate the requirements of Proposition 218 so that the City's penalty rates are likely to be unacceptable and they will be repealed prior to implementation by adoption of this Ordinance.

NOW, THEREFORE, the City Council of the City of Milpitas does ordain as follows:

SECTION 1. RECORD AND BASIS FOR ACTION

The City Council has duly considered the full record before it, which may include but is not limited to such things as the City staff report, testimony by staff and the public, and other materials and evidence submitted or provided to the City Council. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

SECTION 2. AMENDMENT OF MILPITAS MUNICIPAL CODE

Sections 7, 8 and 9 of Chapter 6 of Title VIII of the Milpitas Municipal Code are hereby amended to read as follows:

VIII-6-7.00 - Non-Compliance

Any violation of this Chapter shall be subject to the penalties provision set forth in Section I-1-4.09 (Penalty Provision), Section I-21 (Administrative Citation), Section VIII-1-6.10 (Discontinuance of Service), Section VIII-1-6.11 (Restoration of Service), or any other penalty provisions in the Municipal Code or State law.

VIII-6-8.00 - Applicability

The prohibitions and rationing requirements identified in this Chapter are not applicable to fountains, irrigation systems, cooling towers, and dual-plumb sites that use non-potable water such as recycled water.

SECTION 3. SEVERABILITY

The provisions of this Ordinance are separable, and the invalidity of any phrase, clause, provision or part shall not affect the validity of the remainder.

SECTION 4. EFFECTIVE DATE AND POSTING

In accordance with Section 36937 of the Government Code of the State of California, this Ordinance shall take effect thirty (30) days from and after the date of its passage. The City Clerk of the City of Milpitas shall cause this Ordinance or a summary thereof to be published in accordance with Section 36933 of the Government Code of the State of California.

Appendix I

Draft copy only. Currently under revision.

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS ADOPTING THE 2015 URBAN WATER MANAGEMENT PLAN AND ESTABLISHING THE 2020 PER CAPITA DAILY WATER USE TARGET

WHEREAS, on September 21, 1983, the State of California enacted Assembly Bill 797, known as the "Urban Water Management Plan Act," which, as amended, required that urban retail suppliers of potable water for municipal purposes serving more than 3,000 customers or retailing more than 3,000 acre feet of water annually, adopt Urban Water Management Plans by December 31, 1985 and every five years thereafter adopt updated plans for the conservation and efficient use of water; and

WHEREAS, as in 1985 the City provided municipal water to a population of over 40,000 (now over 72,000) and supplied over 6,000 acre-feet of water annually (now over 8,700 acre-feet), it adopted Urban Water Management Plans on December 17, 1985; June 4, 1991 as amended April 1994; March 19, 1996; January 16, 2001; December 6, 2005; and June 7, 2011; and

WHEREAS, over the past thirty years, the City's Urban Water Management Plans have set forth an increasingly comprehensive and effective water conservation program that includes public information and outreach; residential services such as plumbing fixture and appliance rebates and home surveys; residential and commercial landscaping rebates; residential inverted block (tiered) retail pricing structure; and municipal code requirements through ordinances such as Green Building (Ordinance 65.138 adopted June 2, 2009) and Water Conservation in Landscaping Ordinance 238.3 adopted August 3, 2010; Ordinance 238.4 as amended and adopted December 15, 2015**;** and

WHEREAS, on November 10, 2009, the State of California enacted Senate Bill 7 (SBx7-7), known as the "Water Conservation Act of 2009," that required 20 percent reduction of urban per capita water use by December 31, 2020; required water suppliers to include in their 2010 Urban Water Management Plans per capita daily water use target values to achieve 20 percent water use reduction; and granted a six-month extension, to July 1, 2011, for adoption of 2010 Urban Water Management Plans; and

WHEREAS, to establish the 2020 per capita daily water use target, the City selected Method 1 – "Gross Water Use Method," as developed by the California Department of Water Resources, which required the City's 2020 per capita water consumption rate to be 80 percent of its baseline per capita water use; determined that the City's baseline, as averaged over the ten-year period from July 1, 1995 to June 30, 2004, was 183 gallons per day, and therefore found that the target per capita water use for the year 2020 was 146 gallons per day; and

WHEREAS, as the City's per capita use is currently 108 gallon per day, a consumption rate lower than the 2020 target water use; and

WHEREAS, the City has prepared a draft 2015 Urban Water Management Plan describing the City's service area, existing and planned sources of water, reliability of the supply; water demand and use projections; water conservation and demand management measures; water shortage contingency analysis;

recycled water use, and the 2020 per capita water use target value of 146 gallons per day; and

WHEREAS, the said Plan incorporates the City's current water conservation program consisting of policies, practices, and regulations that may be expected to continue yielding increased per capita water savings as higher-density housing is developed in accordance with water conservation requirements; and

WHEREAS, the said Plan contains a Water Shortage Contingency Plan defining City actions to address four stages of drought causing up to a 50 percent water shortage and catastrophic supply interruptions from power outage, earthquakes, or other disasters; and;

WHEREAS, the City prepared the draft 2015 Urban Water Management Plan in coordination with other appropriate agencies, including other suppliers sharing common sources, regional water management agencies, and relevant public agencies, to the extent practicable; and

WHEREAS, the City has provided notice to the public of its intent to adopt the 2015 Urban Water Management Plan, has made the draft plan available for public review, and has encouraged the public to provide comment; and

WHEREAS, the City properly noticed and held a public hearing on June 7, 2016 prior to adoption of said Plan for the purpose of allowing community comment regarding the City's water conservation implementation plan; consideration of the economic impacts of the implementation plan; and the proposed per capita daily water use target the year 2020.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. The 2015 Urban Water Management Plan, which replaces the 2010 Urban Water Management Plan, is hereby adopted and ordered filed with the City Clerk.

3. The City Manager, or his designee, is hereby authorized and directed to file the Plan with the California Department of Water Resources within 30 days after this date.

4. The City Manager, or his designee, is hereby authorized and directed to implement the Water Conservation Program set forth in the 2015 Urban Water Management Plan, which includes procedures, rules, and regulations to carry out effective and equitable water conservation and water recycling programs; and

5. The City Manager, or his designee, is hereby authorized and directed to implement the Water Shortage Contingency Plan during water shortages when declared by City Council.

PASSED AND ADOPTED this 7th day of June 2016, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Mary Lavelle, City Clerk

APPROVED:

Jose S. Esteves, Mayor

APPROVED AS TO FORM:

Christopher J. Diaz, City Attorney

Appendix J

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location *(Optional Column for Agency Use)*
10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1	**Chapter 2, Section 2.1**
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	**Chapter 2, Section 2.2**
10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	Plan Preparation	Section 2.5.2	**Appendix A**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**Chapter 3, Section 3.1**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**Chapter 3, Section 3.2**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**Chapter 3, Section 3.3**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**Chapter 3, Section 3.3**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**Chapter 3, Section 3.3**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**Chapter 4**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**Chapter 4, Section 4.1.17**
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	**Chapter 4, Section 4.3**
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	**Chapter 5, Section 5.2**

10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 and App E	**Chapter 5 and Appendix B**
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**Chapter 5, Section 5.2**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**Chapter 5, Section 5.3**
10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	**N/A** The City did not adjust its compliance GPCD
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	**N/A** The City is a retailer
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	**Chapter 5, Section 5.3**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**Chapter 6**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**Chapter 6, Section 6.2**
10631(b)(1)	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2	**Chapter 6, Section 6.2** The City does not have a groundwater management plan or authorization. Santa Clara Valley Water District manages the basin for the County.
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**Chapter 6, Section 6.2**

10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	**Chapter 6, Section 6.2**
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	**Chapter 6, Section 6.2**
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.4	**Chapter 6, Section 6.2**
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	**Chapter 6, Section 6.2 and Section 6.7**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**Chapter 6, Section 6.5**
10631(g)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.	System Supplies	Section 6.8	**Chapter 6, Section 6.6**
10631(h)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**Chapter 6, Section 6.4**
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	**Chapter 2, Section 2.2**
10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	**N/A** The City is a retailer
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	**Chapter 6, Section 6.3**
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	System Supplies (Recycled Water)	Section 6.5.2	**Chapter 6, Section 6.3**

10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2.2	**N/A** The City is a not responsible for the treatment and discharge of wastewater.
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	**Chapter 6, Section 6.3**
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	**Chapter 6, Section 6.3**
10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4	**Chapter 6, Section 6.3**
10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.5	**Chapter 6, Section 6.3**
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	**Chapter 6, Section 6.3**
10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	**Chapter 7, Section 7.3**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**Chapter 7, Section 7.2**
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	**Chapter 7, Section 7.2**
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	**Chapter 7, Section 7.2**
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	**Chapter 7, Section 7.4**
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.3	**Chapter 7, Section 7.2**

10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	**Chapter 8, Section 8.1**
10632(a)(2)	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.	Water Shortage Contingency Planning	Section 8.9	**Chapter 8, Section 8.9**
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	**Chapter 8, Section 8.8**
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**Chapter 8, Section 8.2**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**Chapter 8, Section 8.4**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**Chapter 8, Section 8.2**
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	**Chapter 8, Section 8.3**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**Appendix G**
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	**Chapter 8, Section 8.5**
10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2 and 9.3	**Chapter 9**
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Sections 9.1 and 9.3	**Chapter 9**
10631(i)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	**N/A** The City is a not a member of CUWCC.

10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	**Chapter 10, Section 10.2**
10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	**Chapter 10, Section 10.1 and Appendix A**
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	**Chapter 10, Section 10.2**
10635(b)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**N/A** The City is both the retailer and the city to which it provides water.
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	**Chapter 10, Section 10.3**
10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	**Appendix A**
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**Chapter 10, Section 10.2 and Appendix I**
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	**Chapter 10, Section 10.3**
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**N/A** The City is both the retailer and the city to which it provides water.
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	**Chapter 10, Section 10.2**
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	**Chapter 10, Section 10.3**